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ABSTRACT

Exercises are provided in a set of five workbooks designed to aid students in agricultural programs in building vocabulary and reading skills. Each workbook borrows from terminology of agriculture to provide explanations and exercises for a sequential series of instructional objectives. One workbook concentrates on the ability to determine word meanings through contextual inference; in this booklet, exercises are designed to demonstrate the variety of meanings a word can have in different contexts and to caution students about the limitations of using context clues to determine word meaning. Another workbook identifies common suffixes and prefixes used in agricultural terminology and demonstrates how word parts can help define words with which students may not be familiar. A third workbook presents exercises which help the student make efficient use of the dictionary, by reinforcing the student's understanding of alphabetical order and of the components of a dictionary entry. Learning strategies to be used by the student in mastering technical vocabulary are presented in a fourth workbook, and the fifth workbook presents guidelines for reading a repair manual and following its directions. Accompanying the exercises in these five workbooks are pre- and post-tests designed to help students assess their progress in relation to each of the instructional objectives covered. (JP)

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PERSONAL ACHIEVEMENT

READING

Agriculture

Prepared by

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Fund for the Improvement of Postsecondary Education

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USA

CURRICULUM MATERIALS DEVELOPED

UNDER THE AUSPICES OF

FUND TO IMPROVE POST SECONDARY EDUCATION

Prepared by:

Deborah A. Rozeboom

Reading Specialist

1977

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PERSONAL ACHIEVEMENT

READING

Agriculture

Clues to Word Meaning

PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

Select the appropriate meaning for common words according to the context in which they are used. 80% = mastery

1. The doctor said the operation was a success.

   a) business system   b) surgery
   c) running of a machine   d) amputation

2. The smog alert lasted three days.

   a) awake   b) a warning
   c) to warn someone   d) small animal

3. The mechanic said the part hadn't come in yet.

   a) separate   b) role in a play
   c) piece of equipment   d) leave

4. The plant grew two new leaves this week.

   a) factory   b) vegetation
   c) put in the ground   d) salad

5. I tried to nurse the baby bird back to health.

   a) sip slowly   b) hand bag
   c) a person in the medical field   d) care for and heal

Obj. 2

Select the correct meaning of the underlined word by using the context clues. 80% = mastery

1. When I first went to Russia, dissident voices were silent. Today there are a few that are outspoken, and others that are not.

   a) disagreeing   b) friendly
   c) dangerous   d) religious

2. The inevitable trend is automation. Someday a jet liner will be built that will fly itself from take off to touchdown.

   a) slow   b) certain
   c) scary   d) rapid

3. Those wetlands teem with geese. In the fall, when the Canada geese leave, the whole landscape seems to take off.

a) pain up	b) are noisy
c) play games	d) are full of

4. Eventually the anti-metric feeling died away. Great Britian began conversion to the metric system in 1965.

a) change to	b) legalize
c) do away with	d) campaign for

5. The Federal Republic of Germany has emerged as Western Europe's strongest most prosperous nation. How did it happen?

a) won	b) fought
c) appeared	d) disappeared

Obj. 3

Write the correct meaning of the underlined word by using the definition clues. 80% = mastery

1. The portal, on door, swung open wide.
   meaning of portal ______________________________

2. The sedating drug began to have an effect, since the patient grew quiet and sleepy.
   meaning of sedating ______________________________

3. The schedule for the day precluded playing tennis; there just wasn't enough time.
   meaning of precluded ______________________________

4. Origami, or paper folding, is an old art.
   meaning of origami ______________________________

5. Her absence caused total chaos. Everything was in a confused mess.
   meaning of chaos ______________________________

Obj. 4 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using the example clues. 80% = mastery

1. Duplication machines, such as a ditto master or a thermo fax speed up office processes to a great extent.

   meaning of duplicating machines ____________________

   examples of duplicating machines ____________________

2. Raw crops such as corn and soybeans are a mainstay to Iowa's economy.

   meaning of raw crops ______________________________

   examples of raw crops ______________________________

3. Power tools like a hydralic jack or an air wrench are a necessity for a good auto mechanic today.

   meaning of power tools ______________________________

   examples of power tools ______________________________

4. Food additives such as cyclamates, and saccharin are prohibited by the FDA.

   meaning of food additives ______________________________

   examples of food addictives ______________________________

5. Emphysema and asthma are examples of respiratory ailments.

   meaning of respiratory ailments ______________________

   examples of respiratory ailments ______________________

Obj. 5 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using contrast clues. 80% = mastery

1. Unlike the trim lightweight Danish furniture, some of the old Victorian furniture is ponderous.
   ponderous means ______________________________

2. While Jim is a rather lethargic individual, his brother Matt is energetic, alert, and always on the go.
   lethargic means ______________________________

3. In contrast to some modern dissonant jazz, old time jazz was melodic and harmonious.
   dissident means ______________________________

4. Sam wanted to consolidate the two businesses into one, whereas Joe wanted to keep them seperate.
   consolidate means ______________________________

5. The President wanted total and immediate withdrawal of all troops. On the other hand, the Secretary favored more gradual phase out of the troops.
   phase out means ______________________________

Obj. 6 [NOT APPLICABLE TO AUTO REPAIR OR BUSINESS]

Write the correct meaning of the underlined word by using the inference clue. 80% = mastery

1. After he was hung, his name was exonerated when his family proved he had been innocent.

a) cleared	b) forgotten
c) hated	d) revered

2. There will be sufficient food as soon as the crops are harvested.

a) scarce	b) too much
c) enough	d) an absence of

3. The pantomime artist must exaggerate every movement to make it seem larger than life.

a) act out	b) practice
c) hide	d) overdo

4. The filth and poverty in that slum was deplorable.

a) moderate	b) going away
c) pitiable	d) increasing

5. Human rights have become a major aspect of U.S. foreign policy.

a) problem	b) part of
c) army	d) love

Obj. 7 [OBJ. 4 FOR AUTO REPAIR, OBJ. 6 FOR BUSINESS]

Identify the reference pronouns and their referents in the following sentence. 80% = mastery

1. The bags contained gold jewelry, and they were missing the morning after the robbery.

   pronoun ______________ referent ______________

2. Many people have given all they had in the fight for freedom.

   pronoun ______________ referent ______________

3. If it hails now, the farmers are likely to loose most of the crops, but they can apply for crop damage insurance.

   pronoun ______________ referent ______________

4. The forest was turned to a charred battlefield as the fire consumed it.

pronoun ______________ referent ____________

5. The machine wore out because it hadn't been given the proper maintenance care.

pronoun ______________ referent ____________

Obj. 8

[OBJ. 7 FOR BUSINESS, OBJ. 5 FOR AUTO REPAIR]
100% correct = mastery

Write two (2) limitations of using context clues in determining word meaning.

1.

2.

ANSWER KEY
PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

1. B
2. B
3. C
4. B
5. D

Obj. 2

1. A
2. B
3. D
4. A
5. C

Obj. 3

1. door
2. quieting, calming
3. ruledant, eliminated
4. paper folding
5. total confusion

Obj. 4

1. machines that duplicate on copy
   - ditto master, thermofax
2. crops grown in rows
   - corn, beans
3. tools that use external energy
   - hydralic jack, power wrench
4. chemicals added to foods
   - cyclamates, saccharin
5. lung problems
   -emphysema, asthma

Obj. 5

1. huge, heavy
2. sluggish, slow
3. harsh, discordant
4. merge
5. elimination

Obj. 6

1. A
2. C
3. D
4. C
5. B

Obj. 7

1. they - bags
2. they - people
3. they - farmers
4. it - forest
5. it - machine

Obj. 8

1. The context sometimes doesn't always reveal the words meaning.

2. The context may mislead you about a words meaning.

CLUES TO WORD MEANING - AGRICULTURE

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CLUES TO WORD MEANING

By itself, a word does not have a clear, precise meaning. Suppose someone were to ask you the meaning of "field". You might not be able to answer bacause "field" as presented to you does not have a clear, definite meaning. But, if that person were to say "cornfield" you would immediately know he/she is talking about an area of land where corn is raised. If, on the other hand, someone says, "Wow, he can really field that ball!" you would know that in this context "field" means to catch a ball.

The sentences or words surrounding a particular word are called the context. The context can give you the meaning not only of familiar words like "field", but also of new or difficult words. The writer frequently gives the meaning of a new word in the same paragraph or near by so that you don't have to go as far away as a dictionary or even a glossary to find definitions while you are reading.

In this unit you will work on:

(1) special meanings for commonly used words and

(2) getting meanings of words from the context. As you learn these skills, you will enlarge your vocabulary and become a better reader.

OBJECTIVE 1

You will be able to select the appropriate meaning for ten common words, according to the context in which the words are used.

STRATEGY

A word may have more than one meaning. Its meaning depends on the way it is used. Take "hit" for example. A "hit" is what a baseball player gets if his bat connects with the ball; you can "hit" someone else (provided you're bigger than they are) or you can "be a hit" (popular, well received) if you do something everyone else admires.

A "hit" can also be a popular song, a new recipe or a movie--anything very successful. A teacher may only have time to "hit" the high spots in one class period; your father may "hit" the roof when you're late getting home, or a friend may "hit" you for a $5.00 loan.

Have you ever "hit" the books, "hit" the hay or better yet, "hit" the jackpot? The definition of "hit" all depends on the context it's used in.

You have seen and used all of the following words. Each word has many meanings, some of which we don't use as often as others. See how many different ways you can use each word. For example, use the word "stick":

1. A "stick" is a piece of wood.

2. You can "stick" (poke) someone in the ribs.
3. A nickname will often "stick" with a person as he/she grows older.
4. Would you care for a "stick" of gum?

There are many more meanings for "stick." Can you add others to this list?

Now try these. See how many different ways you can use each word.

1. set
2. book
3. pot
4. spring
5. bear

Here are some that are more difficult. They are words which have a special meaning in the context of agriculture. See if you can think of at least two different meanings for each, then check your answers to see if one of them is an agricultural definition. You may use a dictionary if necessary.

1. disc ____________________ ____________________
2. chisel ____________________ ____________________
3. stock ____________________ ____________________

4. plant ____________________ ____________________
5. plow ____________________ ____________________
6. shell ____________________ ____________________
7. combine ____________________ ____________________
8. transplant ____________________ ____________________
9. breed ____________________ ____________________
10. compact ____________________ ____________________
11. row ____________________ ____________________
12. elevator ____________________ ____________________
13. feed ____________________ ____________________
14. section ____________________ ____________________

As you read your class textbooks, watch for familiar words used in unfamiliar ways.

When you have completed these definitions, see your instructor for a post-test covering them.

OBJECTIVE 2

You will be able to determine the meaning of at least eight (8) given words by using context clues.

STRATEGY

Not only does the context decide the meanings of familiar words, but it also gives you an idea of the meanings of words you don't know or haven't seen before.

Often you can tell the meaning of a word by reading the words around it. When you come to a new word read to the end of the sentence (or paragraph) to see if you can figure out the meaning.

EXAMPLE: Glumpf (This is a made-up word. See if you can figure out its meaning.)

a. Fred is very good in glumpf.

(We don't know the meaning of this sentence because we don't know the last word. Go on to the next sentence.)

b. He was in glumpf league last summer.

(There are two clues given in this sentence. What are they?)

1) ______________________ 2) ______________________

c. He can throw a glumpf so slow that you can count the stitches.

(Glumpf hasn't changed; we've only surrounded it with different words.)

d. Last year he visited the Glumpf Hall of Fame in Cooperstown, New York.

(What is the new clue given here? ____________________)

e. From the clues given in the above sentences we know that glumpf means ____________________. (Fill in the blank.)

REMEMBER: Think about all the words you know to see if you can figure out the words you don't know.

1. Now see if you can figure out the meaning of the underlined words in these sentences by using the context. The questions in parentheses will help you think through the process.

   a. The deep-sea diver used a special searchlight to help him see in the murky waters.

   (What would a deep-sea diver use a searchlight for?)

   b. The balloon ascended to a height of six hundred feet.

   (What would a balloon have to do to reach 600 feet?)

   c. The fire was extinguished with a special kind of liquid foam.

   (What might liquid foam do to a fire?)

   murky means ______________________________

   ascended means ______________________________

   extinguished means ______________________________

2. The examples above have the most obvious type of contextual clue--there can be no doubt about the meanings of the words. You only had to use common sense or recall an experience you have had or read about to decide the meanings. We know from experience how people and things act in a given situation. Consequently we can come close to figuring out

the meaning of the word by looking at the situation (the whole sentence) and recalling what a logical outcome would be.

Here is another example of a common sense context clue. Can you tell what magnify means in the sentence below?

The microscope is of the utmost importance in the study of corn genetics because it can magnify objects too small to be seen by the naked eye.

(What is a microscope used for? For enlarging or making things which are usually too small to be seen look bigger. Therefore, magnify means to make things look larger.)

Here are some "common sense" and "common experience" contexts. Each sentence contains a clue or clues to the meaning of the underlined word. Decide the meaning by using common sense or recalling some experience you know about, as in the examples above. Then choose the best meaning for the word according to the context.

____ a. The basketball game was a fiasco, with our team scoring 21 points to their 104.

(1) success
(2) disaster
(3) challenge

____ b. The heart attack victim was resuscitated through the use of mouth-to-mouth breathing.

(1) brought back to consciousness
(2) forced to lie down
(3) helped to his feet

____ c. During those first confusing days, the thoughts of a new student at Kirkwood drift back to high school or home where she was "in", knew everyone and felt comfortable. A feeling of nostalgia sweeps over her.

(1) delight
(2) sadness
(3) homesickness

Although (2) is a possible answer, (3) is the best answer because it is more specific in terms of the sentences given here. As you can see, the context clue is sometimes in front of the word.

Use the context to determine the meanings of the following underlined words:

a. We had no use for our flashlights; the moon illuminated our path very clearly.

illuminated means ______________________________

b. I cannot tell you a secret unless you promise not to divulge it.

divulge means ______________________________

c. President Franklin D. Roosevelt died in 1945, and his wife in 1962; she survived him by seventeen years.

survived means ______________________________

d. Farmers will be in trouble unless the drought ends soon; it hasn't rained in six weeks.

drought means ______________________________

e. The speaker should have used a microphone. His voice was inaudible, except to those near the platform.

inaudible means ______________________________

f. At one point during the hurricane, the winds reached a velocity of 130 miles an hour.

velocity means ______________________________

g. The hod rod race ended in a tie when Paul in "Blue Lightening" and Andy in the "Yellow Streak" crossed the finish line simultaneously.

simultaneously means ______________________________

Check your answers with the answer key. If you got 9 or more correct, go on to the next objective. If you missed more than one, see your instructor before you go on.

OBJECTIVE 3

You will be able to determine the meaning of nine (9) out of ten (10) given words by using definition clues.

STRATEGY

Sometimes authors realize they have used words you, the reader, may not know. In that case they may give an outright definition or explanation of its meanings to help you. In other words, a definition of a difficult word may be clearly stated in the same sentence or at least the same paragraph.

EXAMPLE #1: An agronomist, a scientist who specializes in agriculturally related subjects, is likely to have authoritative opinions on the problem of urban expansion vs. agricultural productivity.

The definition (underlined twice) of agronomist is clearly "an expert on agriculturally related subjects". Here the clue (the definition) is close to the word and is "signalled" by commas on each side of the definition. (Sometimes the word "or" is used as well as the commas.)

A definition or explanation clue is also often indicated by a form of the verb "to be" as in these examples: (the clue is underlined twice)

EXAMPLE #2: The development of the laser--that is, a device which concentrates high energies from radiation into a narrow, sharply focused beam of light--has practical applications in medicine.

EXAMPLE #3: Indian paint brush is a type of showy herb that grows in the southwestern United States.

Sometimes a definition clue appears in the form of description. Again, a form of the verb "to be" is usually used.

CAUTION: Be sure the description is a fairly precise one before you rely on it for a definition. This sentence, "A gazelle has four thin legs and is very nimble-footed," is too general and vague to be a definition.

However, Example #4 is a more precise description, and therefore a good definition.

EXAMPLE #4: The griffin was a mythological monster with an eagle's wings, head, beak and a lion's body, legs and tail.

In the following sentences use the definition clues to decide the meanings of the underlined words. Then write those meanings on the blank lines.

1. "Therefore, the net force, or filtration pressure, represents the glomerular pressure."

____

2. "We must all soon learn how to compute in the metric system which is a decimal system of weights and measures universally used in science."

____

3. "In all these examples, you are observing how plants and animals do their word or, in other words, their behavior."

4. "The simplest of all reproduction methods, with only one parent, is asexual reproduction."

5. Between the point of attachment to the seed and the crown is a tubular, white, stemlike part, the mesocatyl.

6. Corn is the most lucrative or profitable crop to grow in the United States.

7. Erosion, or the wearing away of the soil, is one of the big problems that some farmers must face.

8. Many people are of the opinion that people domesticated, tamed and raised animals before they planted seeds.

9. "Yet science has solved many difficult problems and this is surely a problem of great interest to all of us. As good a way as any to start on the puzzle is to make a sort of guess, a hypothesis, as to how the sun's family might have begun and to see how it works."

____

10. "As you have seen, living things must produce offspring to continue to live. Another name for producing off spring is propagation."

____

How did it go? If you missed more than one, check with your instructor. Otherwise, go on to the next objective.

OBJECTIVE 4

You will be able to determine the meaning of nine (9) out of ten (10) given words by using example clues.

STRATEGY

Examples are frequently used to provide a meaning within a context. Words which sometimes indicate this clue are:

like
especially
other
such as
this
in that way
for example
these

EXAMPLE #1: Methadone is an example of a synthetic narcotic drug.

EXAMPLE #2: Substances like hydrogen and oxygen that cannot be changed into component substances are called elements.

In Example #2 the meaning of "element" is made clear by two clues, an example clue ("like hydrogen and oxygen") and a definition clue ("substances that cannot be changed into component substances"). This combination is common in agriculture books especially, since the writers are eager to emphasize and make certain ideas very clear and precise. In fact, many of the examples for this practise as well as others in this unit were taken from agriculture textbooks.

In the following practices, look for the example context clue. Then write your definition of the underlined word (determined by using the clue.)

1. The farmers brought their grain to the mill to have it ground by the miller. After the grain is ground it is known as grist. When the farmers left the mill, they left a small bag of grain to pay for the grinding.

   meaning of grist ______________________________

2. Cultivation methods, such as plowing, discing, and tilling, have vastly changed over the years.

   meaning of cultivation ______________________________

   example of cultivation ______________________________

3. Agriculture covers a wide variety of occupations, from cattle rancher to truck farmer to implement dealer.

   meaning of agriculture ______________________________

   example of agriculture ______________________________

4. A legume, such as alfalfa or beans, is a plant that helps take nitrogen from the soil and air to form protein.

   meaning of legume ______________________________

   clue to legume ______________________________

5. We have today many means of communication, especially language, that enable us to reach out to the whole world past and present for ideas worth learning.

   meaning of means of communication ______________________

   example of means of communication ______________________

6. Livestock producers have to be on constant lookout for disease in their animals, such as mastitis.

   meaning of mastitis ______________________________________

7. The most serious shortcoming a future farmer could have in terms of characteristics would be a lack of willingness to work hard and long hours.

   meaning of characteristics ______________________________

   example of characteristics ______________________________

8. Because the water supply in his area is sometimes insufficient to last through the dry season, reservoirs have been constructed in which water is stored.

   meaning of reservoir ____________________________________

9. Milk contains so many different kinds of nutrients that it is almost a complete diet within itself for small children. Although adults can live on it for weeks at a time, milk does not contain all the elements essential to human diet, and even infants usually develop better when they have some food besides milk.

meaning of nutrients ______________________________

example of nutrients ______________________________

10. I took an axe and smashed a few of the wooden rungs, much like heavy broomsticks, that are used to bar the boxes in which the gorillas are caged.

meaning of rungs ______________________________

Did you get at least nine of the sentences completely correct? Good! Go on to the next objective.

If you made more than one mistake, see your instructor for further explanation.

OBJECTIVE 5

You will be able to determine the meaning of nine (9) out of ten (10) given words by using "contrast clues."

STRATEGY

A clue to the meaning of a word can sometimes be found in an opposite word (antonym) or a contrasting idea. In using contrast clues to get an idea of the meaning of a word, you may have to search several sentences in front of and/or behind the word.

EXAMPLE #1: Although Mr. Manson guzzled liquor in great quantities every evening, his sobriety was without question during the business day.

Clue: How does drinking great quantities of liquor usually affect a person? That person becomes drunk. What word indicates that Mr. Manson was not affected in the normal way?

____

Meaning: The context clue here is although, which shows contrast. From this clue we know that sobriety means "sober" or "not drunk".

EXAMPLE #2: The flaccid condition of his body was unlike that of Jim, who now exercises daily, watches his diet and has become thin and wiry.

Clue: unlike Jim's good physical condition

Meaning: out of shape

EXAMPLE #3: When the light brightens, the pupils of the eyes contract; when it grows darker, they dilate.

Clue: condition is the opposite of contract (to become smaller)

Meaning: become larger

Each of the following passages contains a "contrast clue". Below each passage write:

1) the clue that led you to the meaning of the underlined word, and

2) the meaning itself.

HINT: The following words are usually clues to contrasting or opposite ideas:

but
yet
on the contrary
nevertheless
meanwhile
not withstanding
or
otherwise
although
however
on the other hand

1. Although hay is an appropriate food for cows, any person who attempts to make a meal of hay will wish s/he didn't. Our internal equipment simply cannot transform hay into tissue building compounds. We find that hay is indigestible by the human system.

meaning of indigestible ____________________

clue ____________________

2. Certain conditions of moisture, light, temperature and so on are required by every kind of plant or animal for life. Where any of these conditions is absent, without supplementary aid, life will not continue.

meaning of supplementary ____________________

clue ____________________

3. Domestic animals are a much more dependable source of food than are wild game. The hunter can never be sure of bringing back food, but the rancher has only to select one of his herd for slaughter and a banquet is at hand.

meaning of dependable ____________________

clue ____________________

4. The praying mantis was given this name because it frequently assumes a position that suggests prayer. This attitude is no true indication of the disposition of the insect, which is cruel and vicious, sometimes feeding on its own kind.

meaning of disposition ____________________

clue ____________________

5. Citrus fruits are grown in tropical regions because the trees cannot survive where there is frost.

meaning of tropical ____________________

clue ____________________

6. The farmers in the valley were satisfied. Little of the grain had been affected by the blight, unlike the neighboring community, where the disease had seriously damaged the crop.

meaning of blight ____________________

clue ____________________

7. Farmers have been afraid that the noise from jet planes would be injurious to their livestock. However, studies on the hogs have shown no bad effect.

meaning of injurious ____________________

clue ____________________

8. Although there are fertile valleys, large forests and a supposed abundance of minerals, there is still a great deal to do in developing the country's resources.

meaning of fertile ____________________

clue ____________________

9. In the United States yearly crop damage caused by weeds amounts to at least five hundred million dollars. Man's best allies in the fight against weeds are the juncos, quail, sparrows, and other birds that destroy tons of weed seed every year.

meaning of allies ______________________________

clue ______________________________

10. Wild sheep, unlike domestic sheep, have long legs and long coarse hair.

meaning of domestic ______________________________

clue ______________________________

Again, check your answers with the answer key. If you missed more than one meaning and/or clue, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 6

You will be able to determine the meaning of nine (9) out of ten (10) given words by using inference clues.

STRATEGY

This kind of context clue is a little more difficult to identify, but is frequently used. You need to learn to "read between the lines" and gather details to figure out the meaning. You will also need to search the context both in front of and behind the unfamiliar word. This type of clue is actually a combination of several types of clues, but there are no specific "give away" words for it.

EXAMPLE #1:	Sharon told her roommate, "I'm through with blind dates forever. This one topped all! What a dull evening! I was bored every minute. The conversation was absolutely vapid!
Clue:	dull evening, bored every minute, through with blind dates
Meaning:	dull, uninteresting

EXAMPLE #2: Agricultural commodities create a tremendous number of jobs in the sale and transfer of agricultural products.

If you pay close attention to the sentences in Example #2, you will be able to infer that the second part of the sentence is a slightly changed restatement of the first. From this you can conclude that commodities has something to do with agricultural products. While you by no means have a full definition of commodities you do have enough of a meaning to go on reading.

Each of the following passages has an inference clue which will give you an idea of the meaning of the underlined word. Read each sentence carefully, then choose or write that meaning in the space below.

1. The odd combination of a breeze and a bright light can also cause sneezing. A skeptical veterinarian once set out to disprove this.

   The word closest in meaning to skeptical is:

   a. renowned
   b. typical
   c. doubting
   d. believing

2. "During oogenesis and spermatogenesis, the processes by which male and female gametes are formed, a reduction of chromosomes occurs in each sex cell so that the gametes contain a haploid number of chromosomes."

   The word closest to haploid in meaning is:

   a. greater
   b. huge
   c. fewer
   d. unknown

3. The biotic community includes the plant and animal life within an area.

   meaning of biotic ____________________________

4. "We can learn a great deal about human inheritance. For example, we know that some parents produce offspring whose blood cannot clot. They have hemophilia."

   meaning of hemophilia ____________________________

5. To eradicate the disease, the vet innoculated the whole herd.

   meaning of eradicate ____________________________

6. The movie, "Rocky", is not a true story; the incidents and characters are entirely fictitious.

   meaning of fictitious ______________________

7. The insufficient rainfall combined with hot dry winds, created a terrible drought.

   meaning of insufficient ______________________

8. And his consecutive games record went on and on. Sick or well, he never missed a game.

   meaning of consecutive games record ______________________

9. With the greatest weaklings eliminated in the early stages, the subsequent mortality rate becomes smaller. Nature eliminates the weakest to strengthen the overall strain of the species.

   meaning of mortality ______________________

10. "Dialogue gives sparkle and life, but it can easily be overdone. Do not employ it for trivialities; do not let it become mere patter. Use it for important and critical encounters."

    meaning of trivialities ______________________

See your instructor upon completion of this section. He or she will check your answers on this part as answers may vary.

OBJECTIVE 7

You will be able to (1) identify reference (pronoun) clues and (2) you will be able to identify the correct referent of given pronouns in nine (9) out of ten (10) sentences.

STRATEGY

Another important context clue is the use of pronouns. Pronouns are words which replace nouns (persons or things). The noun is sometimes called the referent, the word to which the pronoun refers. Very often the referent is in a sentence before. Again, you will need to search the context. (For more explanation of referents, see IRS booklet A-13.)

A. Identify what "they" refers to in each of the following sentences:

1. Many more people now live near the Delaware River. They have built many cities and factories.

   "they" refers to ____________________

2. The sewage and the chemicals have changed the water. They have polluted it.

   "they" refers to ____________________

3. Fish cannot live in the polluted water. They have all died.

   "they" refers to ____________________

B. Be careful to specify the correct referent when you are deciding which noun the pronoun is replacing. The word "they" in sentences 2 and 3 which follow refers to something in sentence 1.

1. All atoms of gold are alike.
2. They have the same kind of nucleus.
3. They have the same number of electrons.

To what does "they" refer?

a. all atoms
b. all atoms of gold
c. gold

C. Remember, pronouns are words that refer to or replace nouns. They are often used to avoid repetition.

In sentence #2 below, "it" is a pronoun. What noun in sentence #1 is the referent for "it"?

1. A system of pulleys can raise the car's engine from its mounting by exerting a force which is smaller than the weight of the engine.
2. It exerts a smaller amount of force over a large distance.

"It" refers to:

a. the weight of the engine
b. the car's mounting
c. a system of pulleys

D. Write the correct referent (noun) that the underlined pronoun stands for in each of the following passages:

1. Both hail and sleet are solid, frozen forms of precipitation. The former is produced when raindrops freeze as they pass through sub-freezing air layers on their way to earth. The latter is formed when snowflakes melt into rain and then refreeze into sleet.

   To what does "the former" refer? ____________________

   To what does "the latter" refer? ____________________

2. Farmers who were reaping small returns from their land because they were not rotating their crops were offered virgin soil of the frontier at low cost.

   "their" refers to:

   a) land's
   b) farmer's
   c) cop's
   d) government's

3. We can learn a great deal about human inheritance. For example, we know that some parents produce offspring whose blood cannot clot. They have hemophilia.

   "They" refers to:

   a) parents
   b) children of the parents
   c) all humans

4. Soybean prices have reached record highs this year and people look for them to go higher.

   "them" refers to ____

5. The earliest tractor had thin metal rimmed wheels and it was often getting stuck in the heavy Iowa soil.

"it" refers to ______________________________

6. The ewe gave birth to two tiny black-faced sheep, who immediately scrambled to their feet and began to nurse.

"who" refers to ______________________________

Check your answers with the answer key. If you missed more than one see your instructor.

Otherwise, go on to Objective 8.

OBJECTIVE 8

You will be able to name two limitations of using context clues in determining word meaning

STRATEGY

You have learned that the context often gives hints of the meaning of words. However, it is also important to realize that:

1) the context sometimes has nothing at all to reveal about a word's meaning, and
2) the context may mislead you about the word's meaning.

What does the context of the following sentences lead you to conclude about the underlined words? Is your conclusion correct in each case? (Check with a dictionary after you've made a guess.)

1. "Corbett had lived in this noisome slum for only two weeks, but he would never forget the screaming voices, the angry quarreling, and the fighting that made slum life so unbearable."

   Your intelligent guess at the meaning of noisome:

   ____

2. "He was livid with rage."

   Your intelligent guess at the meaning of livid:

   ____

In these examples the context is a real fooler!

In sentence 1, both the context of the word noisome and also its structure suggest the meaning noisy. Upon using a dictionary, however, you will find the meanings offensive, distasteful, disgusting, ill-smelling. The word noisome comes from the same root word is annoy and is in no way related to noise.

In sentence 2, did you think livid meant red or flushed? It is a logical "guess" since you have probably seen people turn red with anger. However, the dictionary gives the meanings lead color, ashen, pallid, and ghastly.

What help can you get from the context in these sentences?

"The women had an in-depth discussion of philately that lasted well into the night. Their interest in the subject was so keen that they were unaware for the passage of time."

This is an example of a context which provides no clues to the meaning of the word. You must either already know the meaning of philately and then make sense of it in the context, or you must turn to an outside source--a teacher, a knowledgeable friend, or a dictionary.

SELF POST-TEST

Without looking back, name two limitations of using context clues:

1) ____

2) ____

Check your answers with the "Strategy" under Objective 8. If you missed either one, reread the examples under Objective 8 and see your instructor for further explanation if you have questions.

As one teacher has wisely stated,

> "Context is a magnificent help --- BUT BEWARE!"

Here is a chart of guidelines for using context clues. You will probably arrive at some of your own as you read and use this technique.

DO'S AND DON'TS FOR USING CONTEXT

Do rely on context clues:

1. When you have a definite "unmissable clue"--a definition or direct explanation in the same paragraph.
2. When you have "highly reliable clues"--key words as explained in Objectives 2-6.
3. When you only need a general idea of what the word means.

Don't rely on context clues:

1. When you need an exact, definite meaning. (Context clues only give a general idea of the meaning of the word.)
2. When you don't know the meanings of the words nearby.
3. For technical words--key vocabulary which you are expected to know in your program or occupation.
4. When the word is a very important one--a key to the meaning of the whole sentence or paragraph.
5. When you have come across the word many times; if it is common in the materials you're reading, you'll want to learn its meaning completely for future reading.

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Obj. 1

A. Please stick to the point
This glue will not stick
(Any others that are appropriate)
1. Has the table been set?
Set of tennis
To be set in bridge
Mathematical sets
Book an engagement
A book of matches
Make book
A book is a volume of reading material.
3. Smoke pot
Pot of gold
Pot belly
Pot a plant
4. Spring is a season
Cold spring water
A cat will spring at a mouse.
Bed springs
5. One can bear to the left.
Grizzly bear
Bear children
Bear gifts

B. 1. circular plate
a specific cultivation process
2. to cheat
a specific cultivation process
3. to store up
livestock
4. factory
to sow seed
5. snow plow
specific cultivation process
6. outer covering of a sea animal
husk corn or soy beans down to the individual seed.
7. mix
picking and shelling with one process
8. operation to replace a human organ
replant or move plants
9. to propigate
a certain strain of livestock
10. small car or make-up
compress the soil under machinery
11. use oars to move a boat
a unit in which some plants are grown
12. -device to get people up and down floors in tall buildings
-storage and loading area for grain
13. give food to
specific mixture of food for livestock
14. part of
specific area of land, a mile square

Obj. 2

b. 1) league 2) summer
d. Hall of Fame in Cooperstown
e. baseball
murky means cloudy
ascended means went up
extinguished means put out
a. 2
b. 1
c. 3

Obj.3

1. net force
2. decimal system of weights and measures
3. their work
4. reproduction with one parent
5. stemlike part
[illegible]. profitable
7. wearing away of soil
8. tamed and raised
9. a guess
10. producing offspring

1. lighted
2. give away, tell
3. outline
4. time of dryness
5. not hearable
6. speed
7. at the same time

Obj.4

1. ground grain
2. working the soil
plowing, discing, tilling
3. growing things
cattle rancher, truck farmer, implement dealer
4. plant that forms protein by use of nitrogen
alfalfa or beans
5. way of sharing ideas
language
6. disease in animals
7. personality
lack of willingness to work
8. place where water is stored
9. beneficial parts of a substance
essential elements
10. wooden bars

Obj. 5

1. not digestible - although
2. additional - without
3. certain - can never, but
4. personality - no true indication
5. warm - cannot survive frost
6. disease - little grain was affected
7. bad effect - have shown no
8. rich, good for growing - although
9. friends - birds that destroy
10. tame - unlike wild

Obj. 7

A. 1. people
   2. sewage and chemicals
   3. they

B. B

C. C

D. 1. hail, sleet
   2. farmers'
   3. b
   4. prices
   5. earliest tractor
   6. sheep

Obj. 6

1. C
2. C
3. living
4. no clotting of blood
5. eliminate
6. made up
7. not enough
8. games in a row
9. death
10. unimportant things

Obj. 8

1. Sometimes context doesn't reveal a word.
2. Context may be misleading.

PERSONAL ACHIEVEMENT

READING

Agriculture

Learning Word Parts

PRE/POST TEST
LEARNING WORD PARTS

Obj. 1

Obj. 2 for Auto Body Packet

Match the following prefixes with their meaning.
80% correct = mastery.

1. ____ bi-
2. ____ demi-, hemi-, semi-
3. ____ kilo-
4. ____ milli-
5. ____ mono-
6. ____ multi-
7. ____ poly-
8. ____ centi-
9. ____ quadri-
10. ____ uni-

a. many
b. thousand
c. one
d. single
e. much, many
f. half
g. hundred
h. four
i. thousand, a thousandth
j. two

Obj 2

Obj. 3 for Auto Body Packet

Obj. 2 and Obj. 3 combined for Data Processing, Ag., and Health Packets

Match the following prefixes with their meanings
80% correct = mastery.

1. ____ anti-, contra-
2. ____ trans-
3. ____ in-
4. ____ auto
5. ____ micro
6. ____ inter-
7. ____ mis-
8. ____ post-
9. ____ pre-
10. ____ sub-

a. wrong
b. under
c. before
d. against
e. self
f. between
g. not, into
h. across
i. small
j. after

ANSWER KEY

Obj. 1

1. j
2. ~~g~~ f
3. ~~f~~ b
4. ~~b~~ i
5. ~~i~~ d
6. ~~d~~ a
7. ~~a~~ e
8. ~~e~~ g
9. h
10. c

Obj. 2

1. d
2. h
3. g
4. e
5. i
6. f
7. a
8. j
9. c
10. b

PRE/POST TEST
LEARNING WORD PARTS

Obj. 3 for Business and Environmental Studies Packets

Obj. 4 for Data Processing, Ag., and Health Packets

Obj. 5 for Auto Repair Packet

Tell whether the following words are nouns, adverbs, or adjectives.
80% correct = mastery.

1. situation -
2. slowly -
3. graphic -
4. capably -
5. dentist -
6. tolerance -
7. famous -
8. cheerfully -
9. selfish
10. acidity

ANSWER KEY

1. noun
2. adverb
3. noun or adjective
4. adverb
5. noun
6. noun
7. adjective
8. adverb
9. adjective
10. noun

Obj. 4 for Auto Repair Packet

Write the meaning of the following prefixes.
100% correct = mastery.

kilo - ______________

hecto - ______________

deca - ______________

deci - ______________

cent - ______________

milli - ______________

Obj. 4 for Environmental Studies Packet

Obj. 5 for Data Processing, Ag., and Health Packets

Write the meaning of the following prefixes.
80% correct = mastery.

-scope

-ology

-able

-ize, ate

-phobia

ANSWER KEY

Obj. 4 Auto Body

thousand

hundred

ten

one tenth

hundred, hundredth

one thousandth

Obj. 4 & 5

instrument for visual examination

study of

capable of

to subject to, to make

fear of

PRE/POST TEST
LEARNING WORD PARTS

Obj. 1 for Auto Body Packet

Obj. 4 for Business Packet

Obj. 5 for Environmental Studies Packet

Obj. 6 for Data Processing, Ag, and Health Packets

Write the root word in each of the following words.
80% correct = mastery

1. factually
2. automatically
3. carelessness
4. suitable
5. immaturity
6. endurable
7. concurrent
8. acidity
9. inequality
10. evaporation

ANSWER KEY

1. fact
2. auto
3. care
4. suit
5. mature
6. endure
7. current
8. acid
9. equal
10. vapor

PRE/POST TEST
LEARNING WORD PARTS

Obj. 5 for Business Packet

Obj. 6 for Auto Repair and Environmental Packets

Obj. 7 for Data Processing, Ag., and Health Packets

A. Draw a line between the words that make up the compound word.

B. Then match the compound word to its definition.
80% correct = mastery.

1. ____ bookmark
2. ____ wholesale
3. ____ hardtop
4. ____ windshield
5. ____ pipeline
6. ____ groundwater
7. ____ input
8. ____ feedback
9. ____ feedlot
10. ____ eyestrain

a. glass in front of a vehicle to protect passengers from the wind.

b. the feeding back of part of the output of a machine to the computer.

c. selling of goods in large quantities.

d. pipes joined to provide a duct through which fluids flow.

e. fatigue of eyeball muscles.

f. area where cattle are kept and fattened for market.

g. an auto with a fixed hard top.

h. information to be put into a computer.

i. something put between pages to make it easy to find the place.

j. water below the watertable.

ANSWER KEY

1. i
2. c
3. g
4. a
5. d
6. j
7. h
8. b
9. f
10. e

1. book/mark
2. whole/sale
3. hard/top
4. wind/shield
5. pipe/line
6. ground/water
7. in/put
8. feed/back
9. feed/lot
10. eye/strain

ANSWER KEY
LEARNING WORD PARTS
AG

Obj. 1

1. 3, three
   2, two
   uni, uni, ones
2. 4
   4
   4
3. half
4. hundred, a hundredth
5. equi, i
6. many, one

g
a
l
b
k
f
h
c
j
d
i
e

Self Post-Test

one
single
double, twice
three
fou r
half

hundred, hundredth
thousand, thousandth
thousand
much, many
equal

Obj. 2

1. 1. C
   2. B
   3. A
   4. D
   5. E
   6. H
   7. I
   8. F

2. 1. B
   2. E
   3. A
   4. G
   5. C
   6. F
   7. J
   8. H
   9. I
   10. D

(B) A.1. hyper, hypo
B. ab adjective
   ad adhere
   ab adjust
   ad abductor
   abhor
C. between, within
D. in or into, not
   immature, unable
   into
   into

Self Post-Test

e a
d b
f h
g c

Obj. 3

1. antropocentric - human centered
   antropogenesis - human beginning
   anthropology - study of humans
   autobiography - self story
   autoinoculation - self inoculation
   automatic - self working
   hydroelectric - electricity made with water
   hydrophobia - fear of water
   hydrofoil - water boat
   microbiology - study of small living things
   microscope - instrument to study small things
   microcapusule - small capsule
   macronutrient - large nutrient
   macrolandscape - large landscape
   pneumonia - disease of the lungs
   protoplasm - first life substance
   protophloem - first phloem
   isocellular - equal or same cells
   isomerous - equal characteristics
   isometric - equal measures

Self Post-Test

1. E
2. D
3. A
4. B
5. C
6. J
7. I
8. F
9. G
10. H

Obj. 4

1-3 Check with your instructor

Self Post-Test

1. N
2. ADJ
3. ADJ
4. N
5. N
6. ADJ
7. N
8. N
9. N or ADJ
10. ADV
11. ADV
12. ADJ
13. ADV
14. N
15. ADJ
16. N
17. N or ADJ
18. N
19. N or ADJ
20. ADV

Obj. 5

2. to kill infants
   to kill plants (herbs)
3. cultivation of the land
   cultivation of flora
4. study of
5. a. capable of operating
      incapable of operating
      capable of suiting
      capable of enduring
   b. to give energy
      to make hybred
      to make sensitive
6. fear of
7. changing

Self Post-Test

cultivation or study of
to subject to, to make
capable of
disease or condition, usually morbid
fear
to kill
having the quality of
study of

Obj. 6

a. till
b. vapor
c. immune
d. germ
e. breed on hybrid
f. vapor

2. b. unheat
      reheat
      heater
   c. manliness
      manly
      mannish
   d. disable
      ably
      unable
   e. careful
      careless
      caring
   f. ageless
      aged
      aging
   g. deice
      icy
      icicle
   h. sadder
      sadness
      sadly
   i. unkind
      kindest
      kindly
   j. talkative
      talker
      talking
   k. unheard
      hearing
      hearers

3.1. -ize, ation
  2. immune
     not susceptible to
  3. from an adjective
     describing to a noun
     meaning the process of
     becoming immune
  4. yes

c. ation, transport
   ibly, flex
   ic, ally, gene
   ivity, product
   ity, sterile
   ation, domestic

Self Post-Test

1. place
2. charge
3. cell
4. suit
5. digest
6. equal
7. mature
8. current
9. care
10. fire
11. acid
12. biology
13. ignite
14. endure
15. hydro or phobia
16. magnet
17. product

Obj. 7

E 1. corn/crib
G 2. sheep/walk
A 3. line/breed
F 4. barn/yard
K 5. over/alls
I 6. feed/lot
B 7. hay/stack
J 8. pitch/fork
H 9. self/made
D 10. whole/wheat

LEARNING WORD PARTS - AGRICULTURE

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LEARNING WORD PARTS

A word like evapotranspiration may at first glance seem frustrating and even impossible. But, long words such as evapotranspiration can sometimes be broken down into word parts (evapo trans pi ra tion) which make them easier to understand and read. Often these long words are nothing more than short words with prefixes and suffixes added on. If you are familiar with the word evapo (an abbreviation for evaporate - to pass off in vapor) you will already have an idea of what the longer word, evapotranspiration, means. Once you learn what the root word, transpir, and the ending tion mean, you will have a clearer idea of the meaning of the whole word. Each of the word parts provides a clue to the meaning of evapotranspiration.

In this unit you will learn to identify different parts of words, then the meanings of some of the most commonly used word parts in the Agriculture area. When you know how to do this you will be able to unlock the meanings of many unfamiliar words as you read.

OBJECTIVE 1

You will be able to identify and give the meanings of at least 10 of the following prefixes:

PREFIX	MEANING
bi-	double, twice, two
centi-	hundred, a hundredth
demi, hemi, semi-	half
equi-	equal
kilo-	thousand
milli-	thousand, a thousandth
mono-	single
multi-	many
poly-	much, many
quadri-	four
tri-	three
uni-	one

STRATEGY

Read the following definition and example carefully. A prefix is a syllable (a part of a word) added to the beginning of a word which changes or alters the meaning of the word.

EXAMPLE: Prefix		Word or Root		
poly	+	graph	=	polygraph
hemi	+	sphere	=	hemisphere

Now that you have an idea of how prefixes work, do the following practices. You may look back at the first paragraphs for meanings, but try to fill in the blanks you know first.

1. Fill in the missing words.

Tricycle

A vehicle with _____ wheels.

Tri- means _________________.

Bicycle

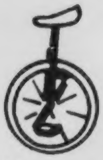
A vehicle with _____ wheels.

Bi- means __________________.

______ cycle

A vehicle with one wheel.

______ means ______________.



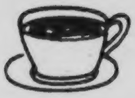
2. A triangle has three sides. How many sides does a quadrangle have? _____

How many feet do the quadrupeds--dogs, cattle, elephants, etc.--have? _____

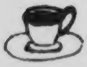
The prefixes quad-, quadri-, and quadru- mean:

____

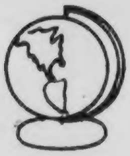
3.



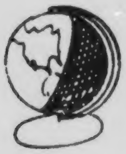
cup of coffee



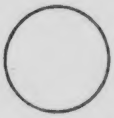
demitasse of coffee



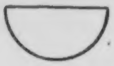
sphere



hemisphere



circle



semi-circle

Demi-, hemi- and semi- mean ______________________________

4. The base word meter is a length of measure somewhat longer than a yard.

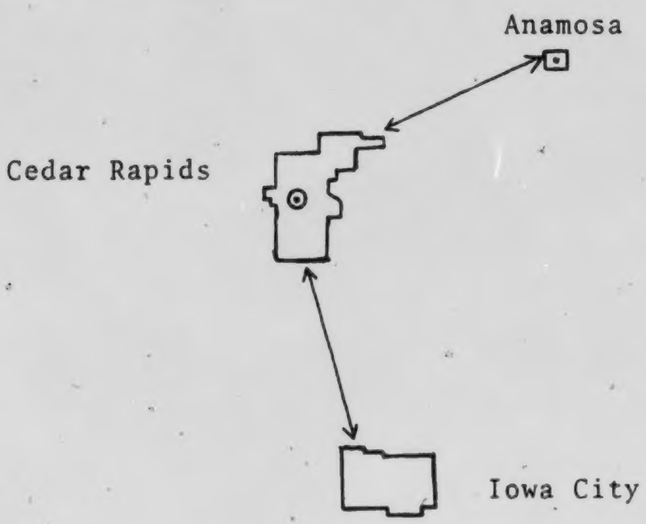
Centimeter is a word made up of a prefix (centi-) and the base word meter. Look back at the list of prefixes and their definitions (under Objective 1) to find out what centi- means.

A centimeter is a ________________ of a meter.

centi- means ____________________________________

5. Anamosa and Iowa City are of equal distance from Cedar Rapids. In other words, Anamosa and Iowa City are ___________ distant from Cedar Rapids.

The al in equal is dropped and replaced by ________ in the prefix equi-.



6. Polygamy is illegal in the United States; only monogamy is legal. That is, one person's being married to two or more (many) people at one time is illegal; one person may be legally married to only one person at a time.

A polygraph, often called a "lie detector" measures the changes in several (many) of the body's processes at the same time.

A polyglot speaks several (many) languages.

Comedians who work alone (one person speaking) give monologues.

A person who speaks in a single (one) tone is said to use a monotone.

poly- means ____

mono- means ____

7. The prefix multi- has a similar meaning to poly-.

multi-colored = something that has many colors

multimillionaire = someone who has millions of dollars

8. Match the meanings in Column 2 to the prefixes in Column 1.

COLUMN 1	COLUMN 2
_____ mono-	a. double, twice, two
_____ bi-	b. hundred, hundredth
_____ uni-	c. half
_____ centi-	d. equal
_____ tri-	e. thousand
_____ milli-	f. thousand, thousandth
_____ multi-	g. single, one
_____ demi, hemi-, semi-	h. many
_____ quad-	i. much, many
_____ equi-	j. four
_____ poly-	k. three
_____ kilo-	l. one

SELF POST-TEST

Cover your work for all previous strategies; write the meaning of each of the following prefixes:

uni-

mono-

bi-

tri-

quadri-

demi-, hemi-, semi-

centi-

milli-

kilo-

poly-

equi-

Did you get 9 or more of the above meanings correct? Good! If you missed more than 2, see your instructor for other activities to learn these prefixes.

OBJECTIVE 2: Part A

You will be able to identify the meanings for at least 13 of the following prefixes.

PREFIX	MEANING
anti-, contra	against, opposite, opposed to
ag-	earth
terra-	land, soil
roto-	circular
psuedo-	false
lac-	milk
nitro-	nitrogen connected
add-	add to
con-	change
mis-	incorrect
post-	after, behind
pre-	before, in front of
ex-	out
sub-	under
trans-	across, through, beyond from one place to another

STRATEGY

These prefixes are frequently used in terminology you will come across in studying agriculture. Their most commonly used definitions are given. Study the prefixes and their meanings before you go on to the practices.

CAUTION: These letters at the beginning of a word are not always prefixes. They are sometimes a part of the base word, as in the word subtle. You should always examine a word carefully to determine first, if it has a prefix, and secondly, what that prefix may mean. (Note that some of the prefixes have more than one definition listed.) But most importantly, you should look at the sentence the word is used in to see if the definition you have determined by word analysis fits.

1. The following words contain prefixes you should become familiar with. In each of the sentences below, select one of these words to replace the underlined word or words. (Use the prefixes for clues.) Write the letter for that word in the blank that follows the sentence.

a. exhaust
b. submerge
c. convection
d. transport
e. anti-toxin
f. transpiration
g. additive
h. condensation
i. subterranean

_____1. Warm, circulated air is present around Iowa highways in the summer.

_____2. The animals must be put under a chemical solution.

_____3. The tractor put out fumes from the operation of its engine.

_____4. They will carry the grain from the elevator to the river terminal.

____ 5. The vet gave the mare medicine against infection.

____ 6. The dew, vapor changed to liquid, clung to the grass in the morning.

____ 7. A mole is an under the earth animal.

____ 8. Water was carried away from the plant through leaf stomata.

2. Match the word in Column A with its meaning in Column B by placing the letter of the correct meaning in the blank that precedes it. Use the prefixes as clues in determining word meanings. Do the ones you recognize easily first.

COLUMN A	COLUMN B
____ 1. nitrous oxide	a. after emergence
____ 2. additive	b. oxygen with nitrogen
____ 3. postemergence	c. land area
____ 4. preemergence	d. period of milk giving
____ 5. territory	e. something added into
____ 6. pseudorabies	f. false rabies
____ 7. agribusiness	g. before emergence
____ 8. misfire	h. fire incorrectly
____ 9. rototill	i. circular tilling of the earth
____ 10. lactation	j. business related to the earth

If you missed more than two of these, check with your instructor before going on.

OBJECTIVE 2: Part B

You will be able to identify the meanings for at least 6 of the following prefixes:

PREFIX	MEANING
ad-	to, toward, near to
ab-	away from
hyper-	over, above, excessive
hypo-	under, below, deficient
im-, in-	in, into, not
inter-	between
intra-	within

1. Special attention should be given to the following sets of prefixes which are very close in spelling, but opposite in meaning.

    A. hypo-, hyper-

    Fill in the blanks:

    The ______-active child is highly energetic and easily distracted.

    The ______-derm is a layer of plant tissue below the epidermis.

    B. ab-, ad-

    Clue: Think of ad- as "to add to".

    Fill in the correct prefix:

    _____-duct means to lead away.

    _____-duct means to draw toward.

She _____-ducted her arm by raising it away from her body.

She _____-ducted it by returning it to or near her side.

These two prefixes (ab- and ad-) are also frequently a part of the base word. When they are part of the base word they're not prefixes. Place a check only in front of the words using ad- or ab- as a prefix. You may use a dictionary to help you determine which are prefixes.

____ advise

____ adjective

____ adhere

____ adjust

____ adept

____ abdomen

____ ability

____ abductor

____ above

____ abhor (to keep away from in scorn or fear)

C. inter-, intra-

1) To intercrop is to grow two crops together, such as clover, between trees in an orchard.

2) An intrasoil zone is soil with characteristics that tie it in to more than one zonal group.

interstate = between 2 or more states

intrastate = within a state

inter- = ________________________

intra- = ________________________

D. im-, (in-)

This prefix has two meanings; you will need to examine the word and the sentence carefully to determine which meaning is correct. First write the two meanings, then fill in the blanks in the following sentences.

im-, in- = 1) ______________________________

2) ______________________________

An immature student is _____ mature; his inability to cope with problems makes him _____ able to lead others.

An injection forces medicine ______ the body.

The medicine is then infiltrated or filtered _____ the blood cells.

SELF POST-TEST

From what you have learned in the above strategy, you should now be able to match the following prefixes and their meanings.

____ inter-

____ intra-

____ ad-

____ ab-

____ hyper-

____ hypo-

____ im-, in-

____ im-, in-

a. over, above, excessive

b. under, below, deficient

c. in, into

d. within

e. between

f. to, toward, near to

g. away from

h. not

If you missed any of these, go back over activities A-D before going on.

OBJECTIVE 3

You will be able to identify at least 8 of the following prefixes.

PREFIX	MEANING
anthropo-	human being
auto-	self
heter- (hetere-)	different
homo-	one, similar, alike
hydro-	water
micro-	small
macro-	large
pneumo-	air
proto-	first formed
iso-	same, equal

STRATEGY

These prefixes have only one, invariant (unchanging) meaning. They along with three of the prefixes given under Objective 1 (mono-, poly-, uni-) will unlock the meanings of many words which you will come across in reading agriculturally related material.

1. Combine these prefixes with the given word parts, then define each word. You may use a dictionary to determine the meanings.

PREFIX	WORD PART	WORD	MEANING
anthropo-	+ centric	= ________	________
	+ genesis	= ________	________
	+ logy	= ________	________
auto-	+ biography	= ________	________
	+ inoculation	= ________	________
	+ matic	= ________	________
hydro-	+ electric	= ________	________
	+ phobia	= ________	________
	+ foil	= ________	________
micro-	+ biology	= ________	________
	+ scope	= ________	________
	+ capsule	= ________	________
macro-	+ nutrient	= ________	________
	+ landscape	= ________	________
pneumo	+ nia	= ________	________
proto-	+ plasm	= ________	________
	+ phloem	= ________	________
iso-	+ cellular	= ________	________
	+ merous	= ________	________
	+ metric	= ________	________

SELF POST-TEST

Match the following prefixes with their meanings without looking back at the activities.

____	1. hydro-	a.	human being
____	2. homo-	b.	self
____	3. anthropo-	c.	different
____	4. auto-	d.	one, similar, alike
____	5. heter-	e.	water
____	6. iso-	f.	small
____	7. proto-	g.	large
____	8. micro-	h.	air
____	9. macro-	i.	first formed
____	10. pneumo-	j.	same, equal

With a score of 8 or more correct on this activity, go on to Objective 4. If you missed more than 2, see your instructor.

OBJECTIVE 4

You will be able to (1) identify the suffixes in 20 given words and (2) determine from the suffix whether the word is a noun, adjective or adverb.

STRATEGY

Suffixes are final syllables added to the end of a word which affect both the word's meaning and the way it is used in a sentence. A suffix often tells you what a word does--whether it names or describes.

Though you may not know what a word means, knowing what it does in a sentence will give you some clues about that word.

Here are some clues to help you identify what a word does in a sentence:

EXAMPLE 1: The suffix -al usually indicates an ADJECTIVE (a word which describes or tells something about a noun).

Facial, practical, and exceptional are adjectives ending in -al.

EXAMPLE 2: The suffix -ly is usually the sign for an ADVERB. An adverb is a word that describes how, where, when or why something happens.

Clearly, quickly, slowly, happily, and immediately are all adverbs ending in -ly.

EXAMPLE 3: Such suffixes as -ion (-tion, -sion), -ence, (-ance), -y, and -ity usually indicate that the word is a NOUN (a word that names a person, place, thing, or idea).

Caution, vision, independence, piracy, and capacity are examples of nouns ending with these suffixes.

1. This practice contains words with suffixes that mark them as ADJECTIVES. Four examples are given for each suffix. Give four more examples for each. You may skim one of your textbooks to find examples.

-ial, -al endings

1. special
2. chemical
3. environmental
4. universal

5. ____________
6. ____________
7. ____________
8. ____________

-ic, -ac endings

1. graphic
2. allergic
3. toxic
4. epidemic

5. ____________
6. ____________
7. ____________
8. ____________

-ful ending

1. cheerful
2. tactful
3. helpful
4. dutiful

5. ____________
6. ____________
7. ____________
8. ____________

-ish ending

1. foolish
2. reddish
3. selfish
4. freakish

5. ____________
6. ____________
7. ____________
8. ____________

-ant, -ent endings

1. pollutant
2. dominant
3. different
4. convenient
5. __________
6. __________
7. __________
8. __________

-ible, -able endings

1. terrible
2. digestible
3. capable
4. communicable
5. __________
6. __________
7. __________
8. __________

-ive ending

1. captive
2. passive
3. preventive
4. decisive
5. __________
6. __________
7. __________
8. __________

-ous, -ious endings

1. cautious
2. deciduous
3. bituminous
4. choripetalous
5. __________
6. __________
7. __________
8. __________

2. This practice deals with words with suffixes that mark them as ADVERBS. Four examples are given for each suffix. Give four more examples for each.

-ly ending

1. quickly
2. mildly
3. slowly
4. easily
5. __________
6. __________
7. __________
8. __________

-fully ending

1. carefully
2. dutifully
3. cheerfully
4. forcefully
5. __________
6. __________
7. __________
8. __________

-ably, -ibly endings

1. capably
2. possibly
3. forcibly
4. noticeably
5. __________
6. __________
7. __________
8. __________

3. This practice contains words with suffixes that mark them as NOUNS. Four examples are given. Fill in each blank with another example. You may skim one of your textbooks to find examples.

-ist, -or, -er endings

1. agronomist
2. environmentalist
3. alternator
4. farmer
5. __________
6. __________
7. __________
8. __________

-y, -ity endings

1. longevity
2. acidity
3. heredity
4. topography
5. __________
6. __________
7. __________
8. __________

-ance, -ence endings

1. confluence
2. delinquence
3. tolerance
4. turbulence
5. __________
6. __________
7. __________
8. __________

-ion, -tion endings

1. transmission
2. condensation
3. sanitation
4. disinfection
5. __________
6. __________
7. __________
8. __________

SELF POST-TEST

Without looking back at any of the practices, underline the suffixes of each of the following words. Place an X in the column that indicates the type of word it is. Some words may be more than one type of word.

	NOUN	ADJECTIVE	ADVERB
1. independence			
2. carefully			
3. brackish			
4. acidity			
5. preignition			
6. helpful			
7. misery			
8. germination			
9. official			
10. rapidly			
11. happily			
12. concurrent			
13. safely			
14. inflorescence			
15. tubulous			
16. viscosity			
17. essential			
18. profession			
19. professional			
20. professionally			

If you made any errors in underlining the suffixes, go back and look at the examples for that suffix. If you missed more than two on the second part of the practice, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 5

You will give the meanings of at least 8 of the following suffixes:

SUFFIX	MEANING
-cide	to kill
-ous	having the quality of
-ology	study of
-phobia	fear
-culture	cultivation of, or study of
-able	capable of
-ize, -ate	to subject to, to make
-osis	disease or condition, usually morbid

STRATEGY

In the following words, is -able a prefix or a suffix?

operable inoperable suitable

It is a suffix because it comes at the end of the word.

Complete the activities below to help you learn the meanings of the following suffixes which are frequently used in agriculturally related vocabulary. Like the prefixes, they will provide clues to meanings of difficult words.

1. noxious
   tetramerous
   monstylous

   All words describe a certain quality, the quality of having one stylous, or the quality of having four parts.

2. -cide: to kill
   pesticide: to kill pests
   infanticide means ______________________________
   herbicide means ______________________________

3. -culture means ______________________________
   agriculture means ______________________________
   floriculture means ______________________________

4. parasitology: the study of parasites
   bacteriology: the study of bacteria
   -ology means ______________________________

5. Explain the meanings of the following words:
   a. The suffix -able means able to or capable of.
      (1) operable ______________________________
      (2) inoperable ______________________________
      (3) suitable ______________________________
      (4) endurable ______________________________
   b. The suffix -ize meant to subject to or to make.
      (1) energize ______________________________
      (2) hybridize ______________________________
      (3) sensitize ______________________________

6. hydrophobia: fear of water

photophobia: fear of light

claustrophobia: fear of close places

-phobia means: ______________________________

7. mitosis: cell division, or the changing of cells

osmosis: interchange of materials in solution through a semi-permeable wall

sclerosis: hardening, changing or becoming hard

-osis means ______________________________

SELF POST-TEST

Without looking back at your work on the previous strategies, write the meaning of each of these suffixes:

-culture ______________________________

-ize ______________________________

-able ______________________________

-osis ______________________________

-phobia ______________________________

-cide ______________________________

-ous ______________________________

-ology ______________________________

If you missed more than 2, see your instructor.

Did you get 9 or more correct? Great!! Now go on to the next objective.

OBJECTIVE 6

You will be able to identify the root words in 15 given words.

DEFINITION:

Root Word = (1) the part of a word that carries the main load of the meaning.

(2) the base of a word to which other parts--prefixes and suffixes--are added.

STRATEGY

Many times words seem "impossible" or unreadable simply because they are long. For example, look at the word just used:

unreadable

Can you see a word within that word? Once you identify the root word (read), the puzzle of this "new" word is practically solved.

Complete the following activities to help you learn to identify root words. Then, look for familiar root words in long words you come across in your reading.

1. Strip the following words down to their root words by removing their prefixes and suffixes:

EXAMPLE: unreadable

(Prefix)		*Root Word*		*(Suffix)*
un	/	read	/	able

(HINT: There might not be both a prefix and suffix in a word. Also, a word might have more than one suffix.)

ROOT

a. untillable ____________________

b. vaporization ____________________

c. immunization ____________________

d. ungerminated ____________________

e. hybridize ____________________

f. evaporate ____________________

2. Look at the underlined root word in each practise below. Three of the four words under it are related in meaning because they are formed from this root word. Check these words. The first group is done for you.

a. sing a tune

_X_ singer
_X_ singable
_X_ singing
____ using

b. steam heat

____ unheated
____ cheat
____ reheat
____ heater

c. woman or man

____ manliness
____ manly
____ almanac
____ mannish

d. able to operate

____ disable
____ table
____ ably
____ unable

e. health care

____ careful
____ careless
____ scare
____ caring

f. years of age

____ ageless
____ aged
____ manage
____ aging

g. snow and ice

____ deice

____ icy

____ icicle

____ notice

h. sad story

____ sadden

____ saddle

____ sadness

____ sadly

i. kind person

____ unkind

____ kindest

____ kindle

____ kindly

j. talk quietly

____ talkative

____ stalk

____ talker

____ talking

k. hear a noise

____ heart

____ unheard

____ hearing

____ hearers

As you can see, when looking for small words within longer words, you need to:

1. look for the root word, not just a certain group of letters, and
2. remember that sometimes the spelling of the root word is changed before a suffix is added. (Example: In Practice C, man is the root word, but with a suffix the n is doubled --mannish.)

3. A word may have more than one suffix (one added on to another) which makes the word look long and difficult. To "attack" this kind of word, follow these steps:

   (1) Look for and break off the suffixes.

   (2) Determine the meaning of the root word.

   (3) Determine the meaning of the suffixes and how they change the meaning of the root word.

   (4) Check the sentence to be sure your definition "fits".

Follow these four steps in deciding the meaning of the following words.

EXAMPLE:

a. hopelessly: He was hopelessly in love with his best friend's girlfriend.

   1) suffix(es): -less, -ly

   2) root word: hope

   meaning: expectation of something good

   3) How is the root word changed by the suffixes?

   -less means "without" and -ly changes the word to an adverb; thus, hopelessly describes the way he loved her--without hope.

   4) Test this definition out in the sentence to see if it makes sense.

b. immunization: The vet provided immunization for the herd.

   1) suffix(es): ______________________

   2) root word: ______________________

   meaning: ______________________

   3) How is the root word chanted by the suffixes?

   ____

   ____

____

4) Does this definition make sense in the sentence above?

Yes ____ No ____

c. Identify the root word in the following words:

	SUFFIXES	ROOT WORD
transportation	____________	____________
flexibly	____________	____________
genetically	____________	____________
productivity	____________	____________
sterility	____________	____________
domestication	____________	____________

SELF POST-TEST

Underline the root word in each of the following words.

1. displacement
2. exchanger
3. intercellular
4. suitable
5. digestable
6. inequality
7. immature
8. concurrent
9. carelessness
10. misfiring
11. acidity
12. microbiology
13. preignition
15. endurable
15. hydrophobia
16. electromagnetic
17. reproductive

When you have completed this test see your instructor. If you got 15 or more correct, you are ready to go on to the next unit.

You will learn the meanings of several root words in your program. Now that you have learned to recognize word parts and the meanings of some of them, you can figure out the meaning of many unfamiliar words.

OBJECTIVE 7

(1) You will be able to recognize known word parts in compound words and (2) you will be able to use the known word parts to determine the meaning of the compound words.

STRATEGY

Sometimes words are made up of two or more parts that are words which make sense by themselves. We call these compound words.

Read pages 2 and 3 in IRS booklet B-2 (Green) for an explanation of compound words. Do the exercises on those two pages in your head. Please do not write in the booklet.

SELF POST-TEST

A. Copy the compound words in the first column onto a piece of paper. Then, draw a line between the two words that make up the compound.

B. Use the meanings of the two short words in each compound to help you find the correct definition for the compound in Column 2. Write the letter of the definition on your paper next to the compound. An example has been done.

COLUMN 1	COLUMN 2
C over|load	a. to use line breeding
1. corncrib	b. a stack of hay
2. sheepwalk	c. to put too large a load in or on something
3. line-breed	
4. barnyard	d. made of the entire grain of wheat
5. overalls	e. a crib for storing ears of corn

6. feedlot
7. haystack
8. pitchfork
9. self-made
10. whole-wheat

f. the ground or yard near a barn
g. a pasture or range for sheep
h. successful through one's own efforts
i. area where cattle are kept and fattened for market
j. three-pronged fork used when working with hay
k. loose fitting trousers worn over other clothing as protection against dirt and wear

Check your answers. If you missed more than one, see your instructor. Otherwise, you are ready to take the teacher post-tests.

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PERSONAL ACHIEVEMENT

READING

Agriculture

Finding Exact Meanings

PRE/POST TEST
FINDING EXACT MEANINGS

Obj. 1

A. Number the following words 1-10 to show their alphabetical order. 80% correct = mastery

____ some
____ hope
____ that
____ I
____ will
____ leave
____ them
____ alone
____ to
____ fly

B. Check where you would look in the dictionary to quickly locate the following words. 80% correct = mastery

	front	middle	back
1. variable	____	____	____
2. telegram	____	____	____
3. envelope	____	____	____
4. numeric	____	____	____
5. grief	____	____	____

Obj. 2

Put an X before each word you would expect to find on a dictionary page that has the two given guide words. 80% correct = mastery

sometimes symbol

____ simple
____ slip
____ spat
____ soil
____ soak
____ stop
____ spoil
____ seal
____ supper
____ stamp

Obj. 3 [OMIT FOR BUSINESS]

In each of the five examples, tell which part of the dictionary entry is underlined. 100% correct = mastery

1. lan·guette (*lăng'gwĕt*) n. [F] Music a thin plate fastened to the mouth of certain organ pipes.

    a. correct spelling and number of syllables (the word itself)
    b. pronunciation of the word
    c. part of speech of the word
    d. origin of the word
    e. meaning of the word

2. pow (pō, pou) *n.* [Scot. and N. Eng.] the poll; the head

    a. correct spelling and number of syllables (the word itself)
    b. pronunciation of the word
    c. part of speech of the word
    d. origin of the word
    e. meaning of the word

3. meg·a·pod (mĕg'ə pŏd') adj. *having large feet*

    a. correct spelling and number of syllables (the word itself)
    b. pronunciation of the word
    c. part of speech of the word
    d. origin of the word
    e. meaning of the word

4. fink (fĭngk) n. [*U.S. Slang*] 1. a strikebreaker 2. a labor spy

    a. correct spelling and number of syllables (the word itself)
    b. pronunciation of the word
    c. part of speech of the word
    d. origin of the word
    e. meaning of the word

5. *lit·er·a·cy* (lĭt'ər ə sĭ) n. state of being literate, possession of education

    a. correct spelling and number of syllables (the word itself)
    b. pronunciation of the word
    c. part of speech of the word
    d. origin of the word
    e. meaning of the word

Obj. 4 [THIS IS OBJ. 3 FOR BUSINESS]

Use the pronunciation key to decide how each word is pronounced. Then check the one of the 3 given words that has the same vowel sound as the first word. 80% = mastery

1. bush (bo͝osh) ____ bus ____ cook ____ loose
2. dove (dōv) ____ love ____ soil ____ choke
3. feign (fān) ____ take ____ fight ____ feel
4. crepe (krāp) ____ crawl ____ sail ____ peep
5. id (ĭd) ____ wit ____ wipe ____ ego

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/
îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/
o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ yo͞o use/ ə about/
zh pleasure

Obj. 5 [OBJ. 4 FOR BUSINESS]

In each sentence is an underlined word that might have several meanings. Choose the meaning that makes the most sense from the several dictionary meanings given. 80% = mastery

1. I am afraid I will forget my keys.

   a. to cease to remember
   b. to omit or neglect unintentionally
   c. to omit to take, leave behind

2. You will soon come to a fork in the road.

   a. the point at which a road or river divides
   b. an instrument having 2 or more prongs for lifting
   c. a tuning fork
   d. dividing into branches

3. The former was early, while the latter was late.

   a. preceding in time
   b. past or ancient
   c. preceding in order, being the first of two
   d. having held a particular office in the past

4. The robbers took a cool million in ice.

   a. solid water
   b. slang for diamonds
   c. to frost
   d. formality

5. We opened up the house to get some circulation.

   a. not shut, as a door
   b. not closed or shut
   c. unfilled
   d. undecided

Obj. 6 [OBJ. 8 FOR BUSINESS]

Name 3 sources besides a dictionary that help you find the exact meanings of words.

1. ____________________________

2. ____________________________

3. ____________________________

FOR BUSINESS ONLY
OBJ. 5-7

Match the following words with their correct definitions.
80% correct = mastery

____ affect

____ effect

____ eligible

____ illegible

____ biannual

____ biennial

____ passed

____ past

____ leased

____ least

1. qualified
2. occurring twice a year
3. went by
4. to influence
5. smallest degree
6. rented
7. result, to bring about
8. occurring every two years
9. not readable
10. earlier in time, gone by

FINDING OUT EXACT MEANINGS - AGRICULTURAL STUDIES

Page

OBJECTIVE 1: (a) Quickly locate the appropriate section of the dictionary in which a word is found (b) arrange given words in alphabetical order 2

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FINDING OUT EXACT MEANINGS (Using Glossaries and Dictionaries)

As you read, you will come across words for which your skills in examining word parts and/or using the context are not enough help when you need to know the exact meaning of a word. The purpose of this unit is to help you become aware of different sources for looking up new words and to help you learn how to use those sources.

Contrary to ideas you may have formed in grade school, a dictionary is not just a tool for frustrating drills and "copy-work". Instead, the dictionary is the most reliable source you can turn to if you want to learn or confirm your hunches about the meaning of a word. In addition to pronunciations and definitions, many dictionaries give information about the history of a word, synonyms (other words that mean the same thing), and antomyms (words opposite in meaning). Sample phrases and sentences also make the meanings of words clearer. All of these features help you better understand new or unfamiliar words.

When you learn how to take advantage of the many features of a dictionary and use it frequently, your vocabulary will improve in your classes and you will strengthen your power to keep your vocabulary growing for life.

OBJECTIVE 1

A. You will be able to quickly locate the appropriate section of the dictionary in which a word is found.

B. You will be able to arrange given words in alphabetical order.

STRATEGY

1. Read IRS Booklet A-23, "Locating Words in a Dictionary", pages 2-3 only.

2. Place these words in alphabetical order on the basis of their first letters:

pomiferous	rotor
chloroplast	acid
evaporation	postpartum

(1) ____________________ (4) ____________________

(2) ____________________ (5) ____________________

(3) ____________________ (6) ____________________

HELPFUL TIDBIT: Did you know that the prefix post- means after?

3. Place the 2 words in each of the following sets in alphabetical order:

(1) lactose - lymph ____________ ____________

(2) legume - leaflet ____________ ____________

(3) mastitis - mange ____________ ____________

(4) cultimulcher - colostrum ____________ ____________

Check your answers with the answer key. If you missed any of these pairs or any item in practice 2, see your instructor before you go on.

4. Where would you look in your dictionary for these words? Put an X for each word on the line under the correct heading--Front (A-I), Middle (H-R), or Back (S-Z).

	FRONT (A-H)	MIDDLE (I-R)	BACK (S-Z)
a) abdomen			
b) seamed			
c) abrasion			
d) regulator			
e) solenoid			
f) purebred			
g) umbellatus			
h) pollination			
i) antibiotic			
j) therm			
k) viscera			
l) nutrition			

Check your answers with the key. Did you get all of them correct? Great! If you missed more than one (1) see your instructor.

OBJECTIVE 2: Using Guide Words

You will be able to locate words in a dictionary by using guide words and alphabetical order.

STRATEGY

Read IRS Booklet A-23, "Locating Words in a Dictionary", p. 5-6. Do the exercises on those pages in your head.

PRACTICE 1: Locating Words in a Dictionary

In each box below, put an X before each word that you would expect to find on a dictionary page that has the guide words shown at the top of the box.

abdomen	ammeter
____ abdominal	____ anhydrous
____ additive	____ abcess
____ antioxidant	____ aphids
____ atrophy	____ alfalfa
____ adrenal	

calyx	creeper
____ cane	____ congenital
____ circuit	____ caprification
____ camshaft	____ cholera
____ compost	____ cranial
____ cycling	____ cortex

legume	mange
____ lacquer	____ mast
____ lenticel	____ manifold
____ lichen	____ magnet
____ lobe	____ malnutrition
____ manure	____ machine

spermatozoa	spruce
____ spleen	____ spine
____ sensory	____ spermatozoon
____ symptom	____ studs
____ shim	____ synchronize
____ solvent	____ spring

Check your answers. If you missed more than two, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 3

You will be able to skim a dictionary entry and identify different parts of the entry in 8 out of 10 examples.

STRATEGY

Each word listed in a dictionary has a variety of information that goes with it. The word and all its information is called AN ENTRY.

Learn the different parts of a dictionary entry.

A B C D
re·tain (ri-tān') *v.* [ME < OF < L *re-back + tenere* to hold]

1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in
E [to retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

A. The first thing to appear in a dictionary entry is the word itself in its correct spelling, and after divided into syllables. Re·tain is shown in two syllables.

B. The second thing listed in a dictionary entry is the pronunciation of the word. This part of the entry, when used with the pronunciation key (which you will study more closely in the next objective) will tell you how to pronounce the word. It will give you not only the sound of the letters, but the number of syllables in the word and which syllable(s) is/are accented.

C. The third part of the entry indicates part of speech. If a word may be more than one part of speech (such as run--*verb* - Run to the store. and run--*noun* - I got a run in my hose.), both symbols will be given (*v.* verb and *n.* noun). Other parts of speech are as follows on the next page.

adj. - adjective

adv. - adverb

prep. - preposition

conj. - conjunction

art. - article

pron. - pronoun

A B C D
re·tain (ri-tān') *v.* [ME < OF < L *re-back* + *tenere* to hold]

E 1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

D. The next part of the entry is the origin of the word, or where the word came from. In the example above you see ME < OF < L. This means the word came to us from Middle English, and before that the word was Old French, and before that it had a Latin base. The explanation of these abbreviations is in the front of the dictionary.

C and D are reversed in some dictionaries.

E. The last part of a dictionary entry is the actual meaning of the word. Often a word will have more than one meaning, and these will be listed in the order they are most frequently used. In other words, the first meaning listed would be a much more common use of the word than the tenth meaning listed.

NOTE: When you use a dictionary, you usually don't need to know all the information given in an entry. By knowing which part of the entry contains the information you need, and by looking directly at that part of the entry, you can save yourself a great deal of time and confusion.

EXERCISE

Below are 5 dictionary entries. On your paper, answer the questions asked about each entry.

1. sa·voy (sə voi') n. [Fr. *cabbage of* Savoy] a kind of cabbage with crinkled leaves and a compact head

   Copy the pronunciation: ____________________

2. scraw·ny (skrô' nē) adj. [Scand.] 1: very thin; skinny and bony 2: stunted or scrubby

   Copy the part of speech: ____________________

   What does that stand for? ____________________

3. skein (skan) n. [ME *skeyn* < MFr.] 1: a) a quantity of thread or yarn wound in a coil b) something like this, as a coil of hair 2: a flock of wild fowl

   Copy the origin of the word: ____________________

   How many syllables does the word have: ____________________

4. stel·lar (stel' ə r) adj. [LL *stellaris* < L. *stella*] a star 1: of the stars or a star 2: like a star, as in shape 3: by or as by a star performer; excellent, outstanding 4: leading; chief a *stellar* role

   What is the second meaning of the word? ____________________

   Copy the pronunciation of the word: ____________________

5. ten·et (ten' it) n. [L., *he holds* < *tenere*] a principle, doctrine, or belief held as a truth, as by some group

   How many syllables does the word have? ____________________

   What part of speech is it? ____________________

   What does the word mean? ____________________

SELF POST-TEST

For the following ten questions write on your paper which part of the entry is underlined.

1. Kob (käb) n.[< native name in Niger-Congo area, as in *Wolof Koba*] an orange-red antelope of SE Africa

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

2. in·sure (in shoor') v. [ME. *ensuren*] 1: to contract to be paid or to pay money in the case of loss of (life, property, etc.); take out or issue insurance on (something or someone) 2: to give or take out insurance

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

3. lei (lā) n. [Haw.] in Hawaii, a wreath of flowers and leaves, generally worn about the neck

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

4. mome (mōm) n.[< ?] a blockhead, fool

   a. correct spelling and number of syllables (the word itself
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

5. mon·e·tize (män' ə tīz) v. [< L. *moneta* a mint + ize]
1: to coin into money 2: to legalize as money

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

6. o·men (ō'mən) n. [L. < OL. *osmen*] a thing or happening supposed to foretell a future event, either good or evil; augery

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

7. or·gan·ist (ôr' gə nist) n. [< MFr. or ML.] one who plays the organ

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

8. per·i·lune (per' ə lo͞on) n. [< peri + lune] the point nearest to the moon in the elliptical orbit of a man-made satellite in orbit around it

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

9. pied (pīd) adj. [ME *pyed*, orig. black and white like a magpie]
1: covered with patches or spots of two or more colors; piebald; variegated 2: wearing a garment of this description

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

10. plex·i·form (plek' sə form) adj. [< plexus + -form]
like, or in the form of, a
plexus or network; complex

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

OBJECTIVE 4: Using a Dictionary for Pronunciation

You will be able to use a pronunciation key to decide the correct way to pronounce a word.

STRATEGY 1

Read IRS Booklet A-5, p. 2-4 "Using a Dictionary for Pronunciation".

PRACTICE 1

Complete Practice 1 on page 5 of the IRS Booklet A-5. Check your answers with Card A-5 at the back of the IRS box.

STRATEGY 2

Read IRS Booklet A-5, p. 6 "Using a Dictionary for Pronunciation".

PRACTICE 2

Beside each word in the first column below is the special spelling to show how the word is pronounced. Use the pronunciation key at the bottom of the page to decide how to pronounce each word. If the word has one syllable, decide what other word in that line has the same vowel sound in it, and put an X in the blank before that word. If the word has more than one syllable, notice which syllable is stressed. What vowel sound does that syllable have? Put an X in front of the word that has the same vowel sound.

EXAMPLES:

* shirr (shûr) ____ hear __X__ fur ____ hire

* rotor (rō' tər) ____ sun __X__ no ____ hot

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/
îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/
o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ yo͞o use/ ə about/
zh pleasure

1. glaze (glāz) ____ key ____ fry ____ gray
2. ratio (rā' shē ō) ____ sweet ____ grape ____ suit
3. coil (koil) ____ coil ____ toad ____ mouth
4. root (ro͞ot) ____ must ____ rude ____ roll
5. rot (rŏt) ____ fed ____ bone ____ hot
6. leaching (lēch' ng) ____ wide ____ chest ____ feet
7. hyper (hī' per) ____ wipe ____ wet ____ clean
8. grove (grōv) ____ coat ____ tent ____ need
9. habitat (hăb' ĭ tăt) ____ game ____ fast ____ bend
10. hull (hŭl) ____ tune ____ would ____ cup
11. life (līf) ____ hut ____ time ____ ruin
12. lobe (lōb) ____ born ____ cone ____ shop
13. plant (plănt) ____ ball ____ lad ____ rain
14. petal (pĕt' əl) ____ her ____ team ____ red

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ yo͞o use/ ə about/ zh pleasure

Did you get 12 or more correct? Good. If not, see your instructor before going on.

OBJECTIVE 5: Using a Dictionary to Get Meaning

You will be able to choose the meaning that makes the most sense in a given sentence from several meanings stated in a dictionary entry.

STRATEGY

Read IRS Booklet A-17, "Using a Dictionary to Get Meaning", pp. 2, 3, 5.

PRACTICE

Complete the practices on pp. 4, 6, and 7. Check your answers with Card A-17 at the back of the IRS box.

If you got 27 or more correct, go on to the next unit. If you missed more than three (3), see your instructor.

OBJECTIVE 6

You will be able to name three sources besides a dictionary which help you find exact meanings of words and identify the location of these sources in materials used in your vocational program.

STRATEGY

1. This puzzle will tell you the name of another source you can use to find an exact word meaning. Read the phrases below. Each one tells about a term in Agriculture that is important to know. (Numbers c and f are thrown in for good measure - see if you can figure them out.) The first letter will help you. Write the word in the blanks. You may use a dictionary.

a. the study of animals

*

Z _ _ _ _ _ _ _

b. grows on a tree

*

L _ _ _

c. What weighs many tons but falls without making a sound?

*

S _ _ _

d. instrument for looking at miniature objects

*

M _ _ _ _ _ _ _ _ _

e. the juice of a plant

*

S _ _

f. What planet do we see more often than any other planet?

*

E _ _ _ _

g. a path
  *
T _ _ _ _

h. fertilized egg cell
  *
Z _ _ _ _ _ _

Now look at the starred (*) boxes. They spell the answer to this question: What is the closest place to look up the meaning of a word found in a textbook?

_ _ _ _ _ _ _ _

CLUE: A list of words and their meanings that is usually found at the back of the book. Look at the sample glossary on page 18.

2. One of the first things you should check when you get a textbook for one of your classes is whether or not it has a glossary.

Use a glossary in one of your texts or the one in Appendix A (at the end of this packet) to answer the following questions.

a. Words are listed in __________________________ order.

Yes, alphabetical order is correct.

b. An entry for a word usually gives ______ (number) definition(s).

c. Definitions for the words are (choose one):

(1) general
(2) specifically related to the subject you're reading about

Did you answer that there is usually one definition? Though the word may have several possible definitions, the glossary usually lists only the specific meaning as related to the subject you're reading about.

3. There are other ways of using your book to find out the precise meanings of words. These ways are reviewed below.

   a. Index:

   This is usually located at the very end of the book. It tells you on what page (or pages) you can find specific information the book contains. A good index lists every subject that is discussed in the book. It does not, however, give definitions for words. (For further explanation of an index, see IRS booklet A-25.)

   b. Footnotes and Context:

   Many times the author gives the definition for a technical word* on the same page, as is being done in this sentence. Sometimes, the authors include the meanings of words within the text material. Pay attention to the style and color of the print. These clues all save you from having to interrupt your reading further by turning to the back of the book or looking the word up in the dictionary. If the word is written in dark, heavy print, it is usually very important to your understanding of the paragraph. If the definition for a word is not given on the same page, check the glossary or the index at the back of your book.

4. The rule of thumb is to look for the closest available source to the paragraph you are reading for looking up the meaning of a word. Place these sources in order of their closest location:

   glossary, dictionary, index, footnotes/or context

   1) __________________

   2) __________________

   3) __________________

   4) __________________

---

* a word related directly to a particular subject area

APPENDIX A - AGRICULTURE STUDIES

Abdomen. The belly.
Anthrax. Disease of cattle and sheep which may attack man.
Antibiotic. Substance produced by a living organism which kills germs or stops them growing.
Antibody. Substance in the body which gives immunity.
Antiseptic. A substance that kills or stops the growth of germs.
Antitoxin. A substance which causes poison to lose its effect.
Bacterium (plural: *bacteria).* Tiny organism consisting of one cell only. Belongs to the plant world.
Capsule. A covering skin.
Carbolic Acid. A very strong antiseptic made from coal tar.
Colony. Collection of germs in a culture.
Cowpox. A virus disease causing blisters on cows' udders.
Culture medium. A substance on which germs may grow.
Cultured. Allowed to grow on a culture medium.
Cytoplasm. The substance of a cell excluding the nucleus.
Digestive system. The part of the body where food is broken down into particles small enough to be absorbed into the bloodstream.
Disease. Illness or sickness.
Epidemic. An infective disease attacking many people at the same time.
Flagellum (plural: *flagella).* A hairlike structure on an organism.
Fungus. A cellular organism which lives on dead plant or animal matter.
Immunity. The ability to resist infection or poisoning.
Immunized. Made resistant.
Incubate. Provide suitable conditions for the growth of organisms.
Incubation period. The interval between infection and the appearance of disease.
Infection. The introduction of germs to the body.
Inflammation. The changes taking place in tissues which are infected.
Malaria. A disease due to protozoa which destroy the body's red blood cells.
Membrane. A thin layer of tissue.
Mucuous membrane. The lining of cavities in the body such as the mouth and nose.
Nucleus. The controlling center of a cell.
Organism. A living thing, plant or animal.
Pasteurization. A special process for sterilizing milk.
Peritonitis. Inflammation of the inner lining of the abdomen.
Plague. A disease of rats which is carried to humans by rat fleas.
Pneumonia. Inflammation of the lung.
Protein. A substance which comes from food and is essential to a living cell.
Protozoa. The simplest forms of animal life.
Pus. Liquid which is formed when inflammation takes place.
Rabies. A disease of dogs which may affect humans.
Respiratory system. The parts of the body concerned with breathing.
Smallpox. A severe virus disease of humans.
Sterilize. To free from germs.
Tissue. A collection of similar cells.
Toxin. Poison formed by an animal or plant.
Vaccines. Killed or altered germs used to produce immunity to disease.
Virulent. Able to overcome the body defenses.
Viruses. Tiny organisms which cause disease but can only multiply in living cells.

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ANSWER KEY
PRE/POST TEST
FINDING EXACT MEANINGS

Obj. 1

6 some

3 hope

7 that

4 I

10 will

5 leave

8 them

1 alone

9 to

2 fly

1. back
2. back
3. front
4. middle
5. front

Obj. 2

spat
stop
spoil
supper
stamp

Obj. 3

1. B
2. C
3. E
4. D
5. A

Obj. 4

1. cook
2. choke
3. take
4. sail
5. wit

Obj. 5

1. C
2. A
3. C
4. B
5. B

Obj. 6

1. glossary
2. index
3. footnotes/context

BUSINESS ONLY 5-7

4 affect

7 effect

1 eligible

9 illegible

2 biannual

8 biennial

3 passed

10 past

6 leased

5 least

Obj. 1

2.1. acid
2. chloroplast
3. evaporation
4. pomiferous
5. postpartum
6. rotor

3.1. lactose - lymph
2. leaflet - legume
3. mange - mastitis
4. colostrum - cultimulcher

4. a. F
b. B
c. F
d. M
e. B
f. M
g. B
h. M
i. F
j. B
k. B
l. M

Obj. 2

abdomen - ammeter
x abdominal
x additive
x adrenal
x alfalfa

calyx - creeper
x cane
x circuit
x camshaft
x compost
x congenital
x caprification
x cholera
x cranial

legume - mange
x lenticel
x lichen
x lobe
x magnet
x malnutrition
x machine

spermatozoa - spruce
x spleen
x shim
x solvent
x spine
x spermatozoon
x spring

Obj. 3

1. (sə voi')
2. adj. -adjective
3. [ME skeyn < MFr] , 1
4. like a star, as in shape, (stel'ər)
5. 2, noun, a principle, doctrine or belief held as a truth, as by some group.

Self Post-Test

1. C
2. A
3. E
4. D
5. B
6. A
7. E
8. B
9. C
10. D

Obj. 4

1. gray
2. grape
3. coil
4. rude
5. hot
6. feet
7. wipe
8. coat
9. fast
10. cup
11. time
12. cone
13. lad
14. red

Obj. 6

1.a. zoology
b. leaf
c. snow
d. microscope
e. sap
f. earth
g. hail
h. zygotes
GLOSSARY

4.1. footnotes/or context
2. glossary
3. index
4. dictionary

PERSONAL ACHIEVEMENT

READING

Agriculture

Mastering Technical Vocabulary

Revised by Deborah A. Rozeboom
from Ellen Lamar Thomas and
H. Alan Robinson, *Improving Reading
in Every Class: A Sourcebook for
Teachers;* copyright by Allyn and
Bacon, Inc., 1972, pp. 297-304.
Reprinted with permission. Some word
changes have been made for easier
reading.

PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

List at least three (3) ways an author may alert you to important terms in your text.

1. ______________________
2. ______________________
3. ______________________

STRATEGY 2

List at least eight (8) things to do to learn a new technical term.

1.	______________________	5.	______________________
2.	______________________	6.	______________________
3.	______________________	7.	______________________
4.	______________________	8.	______________________

STRATEGY 3

Explain what the "divided page glossary" is, and how it may help you learn new terms.

STRATEGY 4

Explain what a "cover card" is, and how it may help you learn new terms.

STRATEGY 5

Explain how using your auditory and motor channels help you remember new terms.

STRATEGY 6

Mark the following statements True or False

____ Your greatest time for forgetting is within 24 hrs. after you first heard something.

____ It is a good idea to review a previous assignment immediately before going on to a new assignment.

____ It is better to study an assignment once, for a large amount of time, then several times for shorter amounts of time.

STRATEGY 7

Explain why you should set your own goals for learning new vocabulary.

MASTERING VOCABULARY

Here's a method that can help you lift your vocabulary well above its present level. It's tailored to your individual preferences. You decide the words you want and need. You collect them when time is available, and not when it isn't. You set your own goals and move toward them as you wish. This method will help you not only learn, but also remember the meanings of new vocabulary words.

HOW TO MASTER THE VOCABULARY OF AGRICULTURAL OCCUPATIONS

(Put these tips to work, and your dividends may be dramatic!)

As you begin a new course in an Agricultural Occupation, it may seem as if you're learning a foreign language. Difficult new technical terms crowd the pages. Easy, familiar words appear with unexpected new meanings. The everyday word between suddenly becomes technical - with an extremely precise meaning! The word exactly takes on a special meaning - even any, if and or.

Rote memory is no longer enough. You must gain a working understanding - learn to use the new "word tools" well and intelligently. Once an unfamiliar word is defined, or a familiar term defined again, the authors will use it again and again, taking it for granted that you will understand it. If you pass over these new terms lightly, word blocks will soon get in the way of your learning. Your reading will become an obstacle course. Learn the new terms thoroughly when they're introduced, and you'll be able to grasp essential new knowledge for use in your courses and work.

Clearly, your vocabulary abilities now become a tremendous asset. Fortunately, learning experts - in actual experiments with students - have researched learning and memory techniques. Some of the strategies suggested here are based on years of experimentation in the psychology of learning.

STRATEGY 1:

HOW WILL THE AUTHOR ALERT YOU TO IMPORTANT TERMS?

When key terms or concepts are first introduced to you in textbooks, the authors usually flag you with a conspicuous signal. The signal used may be heavy black (boldface) type, *italics*, color, and underlining. Words signalled in these ways are crucially important "official" Agricultural Occupations terms.

In the passage below, the authors make an important term stand out on the page by underlining it.

STOP!
LOOK!
LEARN!

The mature kernal is made up of three main parts--the seed coat, or pericarp, the starchy endosperm, and the embryo which will develop into a new plant.

ACTIVITY

Scan your own textbook and see how the authors signal important new terms. List those ways on a separate piece of paper.

* * *

Sometimes there is an "explosion" of new words - like the one below - in a very brief space. Yet every new term is basic for your future learning and calls for thorough learning and remembering.

TOOLS FOR
FUTURE
LEARNING

Most preemergence herbicide treatments will work effectively where specific tillage practices have been used.

STRATEGY 2:

TIPS FOR LEARNING DIFFICULT TECHNICAL TERMS

1. Pay attention to each term when it first appears. Read so that you understand the definition--not to memorize, but to get a real understanding of the meaning.

2. Take a new word apart if you can. Do you recognize a familiar part? If, for example, you recognize the familiar prefix poly- meaning many, you already have a hold on polygamist, polygraph, polyglot. If you recognize the word part equi- meaning equal, it helps you unlock equidistant, equivalent, and equation. The familiar prefix co- meaning with or together with, can help you understand coordinate, cooperate, and co-worker. (See Unit I for more word part clues.)

3. Read and reread as often as is necessary. Reading-once-straight-through patterns are not very helpful. Complete stops are called for frequently. Thought time is essential in addition to reading time.

4. The authors' definition of a new term is almost always followed by examples. Examine these examples and figure out whether in fact they do follow the defintion.

5. Try to think of counter examples, examples which do not come under the definition. When thinking of these, you may find it helpful to change a word or two in the definition.

6. Read the definition as you read all Agricultural Occupations materials, pencil in hand. Make notes and create your own examples.

7. Suppose as you are reading the definition of the new term, you come across a technical term you've already met in the course whose meaning you don't remember. We all forget! You have the meaning right at your fingertips through the index for instant access to the original explanation of the forgotten term.

8. As you're working with the new term, try to express its meaning in actual words--your own words.

9. You may find a "List of Some Important Terms to Learn" toward the end of each chapter. You'll want to check your understanding of this list of terms. The terms the authors have selected for this list are crucial. You may also want to check your own list of key words and their meanings.

10. Make an effort to use your new Agricultural Occupations terms.

IN SUMMING UP

1. Read to understand.
2. Look for familiar word parts.
3. Reread.
4. Study the examples.
5. Make up counterexamples.
6. Be active with your pencil.
7. Use your index.
8. Self-recite.
9. Review.
10. USE YOUR NEW LEARNINGS!

STRATEGY 3:

A. MASTERY OF NEW TERMS

Should you memorize the meanings of new terms? Chances are you won't need to. Memory of the meanings of new words will often come about naturally as you go over the material, reread, do problems. This is not to encourage half-learning of essential terms. Terms in Agricultural Occupations are defined rigorously. It's essential to get strict meanings in mind. Remembering a very close version of what has been said will be a tool in future learning and on your job.

B. KEY WORDS SHOULD BE "COLLECTOR'S ITEMS"

Set aside a section of your notebook as an Agricultural Occupations Glossary. As you run across each new key term, collect it for your glossary. Keep this record up to date from day to day. Take about two minutes - that's all you'll need - to make each entry.

You may find the "divided page" handy. Make a line down the middle of the page in your notebook. In the Key Term column to the left, record the new word. In the Meaning column to the right, write the meaning carefully.

The divided page is handy when review time comes. The dividing line makes it possible to conceal the meaning completely as you check your understanding of a term later.

Mark the end of each unit - perhaps with a double line. Now when you want to go back and check on the new words you've studied in a certain unit, you'll know exactly where to find them.

If you were to do nothing more than record the new words you'd met in a unit and then lose your glossary, you would still have an advantage. The muscular act of writing, in and of itself, would have already strengthened your learning.

THE "DIVIDED PAGE"

KEY TERM	MEANING
	Test your understanding by covering this side.

ACTIVITY

Turn to a chapter you are presently studying in one of your course textbooks. Locate and record ten (10) key terms and their meanings in your glossary. Congratulations! . . . you now have the beginnings of a helpful tool. Use it as you read further for class.

STRATEGY 4:

USE THE "MOST POWERFUL STUDY TECHNIQUE"

Students often ask, "How can I retain what I study?" You can learn for the future with the most powerful study technique known to psychologists!

Conceal the right-hand side of your divided page with your hand or with a cover card (index card) and try to express the meaning - not by memory, but with full understanding of what you are saying. Then lift the card and check. Continue checking until you have full understanding. Mark items that are especially difficult, and double-check these next time.

You'll find a cover card handy in other ways. Using a card to work through chapters as you review is often more effective than rereading. You can reread materials and dream all the way through. The cover card forces you to concentrate as you struggle to recall what's underneath.

Any writing you have already done - on a scratch sheet or on the divided page - has already reinforced your learning.

"See it! Say it! Hear it! Draw it or write it!" is all-out study - a four-way reinforcement. The variety itself helps you recall. The change of pace - eyes, ears, voice, pencil - keeps you alert and increases the amount you learn.

ACTIVITY

Use the technique you've just read to learn the ten (10) words on your glossary list. When you feel confident that you know the words, see your instructor for a post-test.

STRATEGY 6:

TO RETAIN LONGER, SPACE OUT YOUR REVIEWS

You can remember longer simply by the way you place your reviews. You can place your first review to minimize forgetting. Suppose you read your class assignment today. When will forgetting take its greatest toll? If your forgetting is typical, the greatest loss will be within one day. Arrange your first review to check this drop. Place it from 12 to 24 hours after you study your vocabulary terms. Reinforce immediately, and you will remember much longer. It might be a good idea to review the previous assignment immediately before going on to the new assignment.

STRATEGY 5:

USE YOUR SENSES FOR FASTER, FIRMER LEARNING

Multisensory study can speed and strengthen your learning. Eyes are just one of your learning channels. Use your eyes only, and you turn on just one-third of your sensory channels for mastering a new term. What other learning channels can you use? Your auditory and motor channels.

"SEE IT!
SAY IT!
HEAR IT!
DRAW IT OR WRITE IT!"

As you study, see the material as you read the word and think about its meaning.

Then say the new term and formulate its meaning aloud or in a whisper. Now you're adding kinesthetic learning. As you form the sounds, the muscles of your throat, tongue, and lips are reinforcing your memory.

And as you say it, hear it. Now you call in hearing, another learning channel.

Draw a figure to illustrate the term or write down its meaning. Now you bring more learning power into play - your motor equipment. Write down just a key word or two in the definition as you express the meaning to yourself. Pencil work helps concentration; it has a "no-doze" effect.

A study expert pointed out the "Curve of Forgetting" to military officers returning to academic study after being out of school for several years.

The first student studied one hour on September 30, and six weeks later remembered very little.

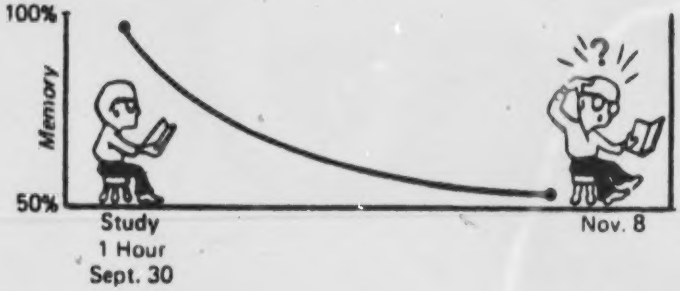

FIGURE 6–7. Curve of forgetting. (Drawing reproduced by permission of Dr. Staton.)

The second student studied only 30 minutes on September 30, but he spaced out his reviews - 15 minutes on October 1 and 10 minutes more on October 8. On November 8 it took this student just a 5 minute review to bring back what he wanted - with 100% mastery.

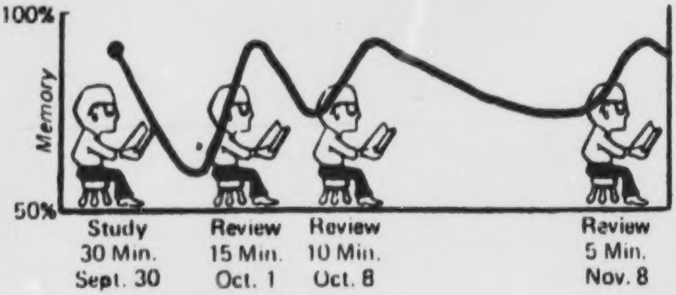

FIGURE 6-8. Spaced reviews. (Drawing reproduced by permission of Dr Staton.)

Both students studied just one hour, but the one who spaced out his reviews had far better retention.

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* Thomas F. Staton, *How to Study* (Montgomery, Alabama: Box 6133, 1968), p. 59. The drawings are reproduced with permission.

Your glossary of terms lends itself to spaced review. You can have a quick run-through waiting for a friend, riding to school, waiting for a bus, between classes, just before a test.

Take care, though, that your run-throughs don't become unthinking, mechanical repetitions. Your instructors hope that as you review your terms and their meanings, you will focus on what the definition is really saying. They sound this warning:

> Though precise understanding is absolutely essential, too much stress on memorization of words may destroy your understanding of their real meanings.

You'll find that spaced-out reviews will pay you high dividends in aspects of Agricultural studies other than vocabulary and in other school courses as well.

LEARN THE NEW TERMS FROM DAY TO DAY! THEY'LL BE YOURS TILL THE LAST DAY OF THE COURSE - AND BEYOND - AS TOOLS FOR GRASPING ESSENTIAL NEW KNOWLEDGE.

ACTIVITY

Review the same ten (10) words you were tested on at one and two weeks from today. During the fourth week, give yourself a quiz to see how much you remember at that point.

STRATEGY 7:

SET YOUR OWN GOALS FOR VOCABULARY

Only you can set goals for yourself! Only you can move toward them!

If you've decided to start a personal word collection, please set goals for yourself as suggested below. You'll want to consider your test score, your own judgement as to what you need, and any suggestions from your teacher.

The goals you set today are only tentative. You may wish to change them as you make progress. Your goals should be realistic. Planning more than you can possibly attain brings only disappointment.

Your teacher will discuss your goals with you.

TO IMPROVE YOUR VOCABULARY	PLANNED	FINISHED
1. How many words do you plan to have in your personal word collection (and really learn) before the end of the month?	____	____
2. Have you decided to collect a definite number of words each day? week? If so, what is your quota?	____	____
3. Some students prefer not to set a daily or weekly quota, but to collect their new words whenever the reading they are doing at the moment lends itself. If this is your decision, indicate by checking here. ____		

ANSWER KEY
PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

1. heavy type
2. italics
3. colon, also underlining

STRATEGY 2

any 8 of the following

read to understand
look for familiar word parts
reread
study the examples
make up counter examples
be active with your pencil
use your index
self-recite
review
use your new words

STRATEGY 3

Divided page glossary is a form used to make your own glossary, with terms written on one side of the page and their meanings on the other. It is an orderly way to collect, store, and learn new terms.

STRATEGY 4

A cover card is simply a card used to cover up meanings or terms to check your memory when you are trying to learn terms. It helps you concentrate on what you are studying.

STRATEGY 5

By using your sight, voice, hearing, and muscles to study a word you learn the word through a variety of senses and therefore learn the word better.

STRATEGY 6

T, T, F

STRATEGY 7

By setting your own goals, what you learn is meaningful to you, and applies directly to your needs.

PERSONAL ACHIEVEMENT

READING

Agriculture

Reading a Manual and Following Directions

PRE/POST TEST
FOLLOWING DIRECTIONS AND READING A REPAIR MANUAL

Obj. 1

Read all directions thoroughly before you begin this task.
100% correct = mastery

STEP 1 - In the dictionary, locate the word direction.

STEP 2 - On your paper, write down the pronunciation of "direction."

STEP 3 - On your paper, write down the part of speech of "direction."

STEP 4 - On your paper write the number of different meanings of the word directions.

STEP 5 - On your paper write the answers to steps two-four in reverse order.

Obj. 2

Define the following diagram devices. 100% correct = mastery

1. letter or number keys

2. arrows or lines

3. captions

4. color codes

Obj. 3

What three (3) sources might you check to learn the meaning of unfamiliar words you find in written directions?
100% correct = mastery

1. ______________________

2. ______________________

3. ______________________

Obj. 4

Match the following terms with their definitions.
100% correct = mastery

____ pull

____ slide

____ prime

____ solder

____ install

a. to prepare for operation

b. put in or on

c. move in smooth contact with surface

d. to join with metal alloy

e. move by force applied toward you

Obj. 5

Below are the directions for starting a car with an automatic transmission. Number them in the correct order. 82% correct = mastery.

____ Fasten your seat belt.

____ Insert key into ignition.

____ Sit in the driver's seat and close your door.

____ Adjust rear view mirrors.

____ Make sure car is in "park".

____ Adjust the seat to your leg reach and comfort.

____ Turn key and hold until engine catches.

Obj. 6

1. Write three(3) printing devices used to set cautions apart from the rest of directions. 89% correct = mastery.

____________ ____________ ____________

2. Draw one common symbol for caution.

3. Write five (5) words used as a sign of caution.

____________ ____________ ____________

____________ ____________

Obj. 7 100% correct = mastery.

Which part of the manual:

1. explains the general layout of the manual?

2. tells what pages things appear on?

3. reviews overall information?

4. tells what machine the manual deals with?

5. discusses the "odds and ends" aspects of the machine?

6. Most manuals are organized by what device?

ANSWER KEY
PRE/POST TEST
READING A MANUAL AND FOLLOWING DIRECTIONS

Obj. 1

STEP 4 - number may vary
STEP 3 - noun
STEP 2 - di rek'shən

Obj. 2

1. keys that use numbers or letters to label parts of a diagram
2. arrows or lines used to identify part of a diagram with its label.
3. explanations written beneath illustrations on diagrams.
4. different colors to denote different systems or areas.

Obj. 3

1. dictionary
2. diagram
3. expert

Obj. 4

e
c
a
d
b

Obj. 5

3
6
1
4
5
2
7

Obj. 6

1. large print, different colors, underlining.
2. any visual warning, such as skull and cross bones, for poison.
3. (any 5 are correct) DANGER, never, precaution beware, do not, warning caution, always, remember

Obj. 7

1. introduction
2. table of contents
3. general section
4. cover
5. miscellaneous
6. sections

FOLLOWING DIRECTIONS AND READING A REPAIR MANUAL

AG MECHANICS

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INTRODUCTION

Sometimes written directions that you are given are short and easy to follow. For example, if you see "To open, tear here" on the corner of a package, you usually don't try to tear another corner to open the package. Or if you are following written directions to a friend's house and you read "Turn right on Saratoga-Sunnyvale Road," you wouldn't turn left on Saratoga-Sunnyvale Road, nor would you turn right on some other road.

Some written directions are longer, however, and may be more complicated. Even then, you need not have difficulty in following them if you know how to read written directions.

The most important thing to remember is that you should not read directions in the same way that you read a story. Directions should be read slowly and carefully so that you can follow them properly. If you fail to do this, you may make a mistake in an assignment and get a poor grade, or you may ruin something you are trying to make,

This packet will look at some specific things you can do to read and follow written directions correctly.

OBJECTIVE 1

Students will show that they have read directions thoroughly by accurately completing a prescribed task.

Have you ever thought you knew how to do something, only to find you made a mistake when you didn't take time to read the directions all the way through?

STRATEGY

Whenever you need to follow written directions, it will help if you remember these two steps:

STEP 1: Read all the steps in the directions first, before you begin to follow them.

STEP 2: After you have read all the directions, reread them slowly. This time, read each step carefully and do exactly what it tells you to do. Be sure to follow the steps in the proper order. Sometimes you may need to read some of the steps a third time in order to understand and follow them correctly.

Do the exercises on the next page, making sure you read and follow the directions that are given to you.

Use your own paper and pencil to complete this exercise. Do not write in this booklet.

1. Read each item on this page before doing anything.
2. Put your name in the upper right-hand corner of your paper.
3. Draw five small squares in the upper left-hand corner of your paper.
4. Put an "X" in each square.
5. Put an "X" in the lower left-hand corner of your paper.
6. Draw a rectangle around the "X" in the lower left-hand corner.
7. Draw a triangle around the "X" in the lower left-hand corner.
8. Raise your left hand when you get to this point in the test.
9. If you think you have followed directions carefully to this point, write "I have" in the middle of your paper.
10. On the reverse side of your paper, add the numbers 1213 and 1312.
11. Put a circle around your answer, and put a square around the circle.
12. Punch three small holes in the top of your paper with your pencil point.
13. Now that you have finished reading carefully, do only sentence two.

If you did not follow the directions correctly you wasted your time, your paper, and your energy. The same thing can happen with the directions in a manual. If you don't follow them exactly you may not only waste your time, you may seriously damage a piece of equipment.

Do the self post-test on the next page to show that you have read all the directions thoroughly.

SELF POST-TEST

DIRECTIONS:

Across the top of your paper write the letters of the alphabet. Then, on the same piece of paper print the letters U, P, Q, K, V, E, G, T, K, F, · G, J, V, · F, G, Y, Q, N, N, Q, H, · K in reverse order across one line of your paper, leaving spaces where the dots appear above. Each letter stands for the letter that comes two places before it in the alphabet. (For example, C in the code would stand for A). Beneath each letter you have written, print the letter it stands for.

Show your paper to your instructor before you go on.

OBJECTIVE 2

Students will demonstrate the ability to read different devices often found in diagrams.

Many written instructions, especially those in repair manuals, rely heavily on diagrams to get their point across, or to explain a procedure. It is important to be familiar with different ways an author may present a diagram so that you may accurately follow the steps of the instruction.

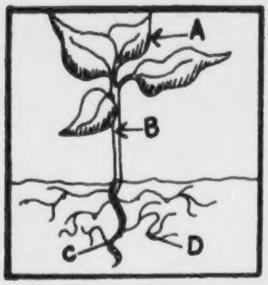
STRATEGY

Learn some of the different devices in a manual diagram.

1. LETTER (OR NUMBER) KEY

   A letter (or number) will appear on the diagram, with a little chart at the bottom that tells what each letter or number stands for.

A - cap
B - stalk
C - nucleus
D - rhizoids



2. USE OF ARROWS OR LINES

   Lots of times in a diagram, a part in the picture won't be big enough to label with its name ON the item, so the name will be written off to the side, with an arrow or line to that part of the diagram named. Be sure to follow the arrow or line carefully to identify different parts of the diagram. An example of the use of arrows in labeling is in the example above.

STRATEGY (cont.)

3. **CAPTIONS**

   Sometimes short explanations of illustrations and diagrams will be written underneath diagrams. Be sure to read these captions carefully.

4. **COLOR CODES**

   Sometimes different colors in a diagram indicate different things such as 2 systems shown in one diagram. Also, when different color can't be used, different printing designs may be used, such as:

   xxxx
   xxxx ////////// ⁙

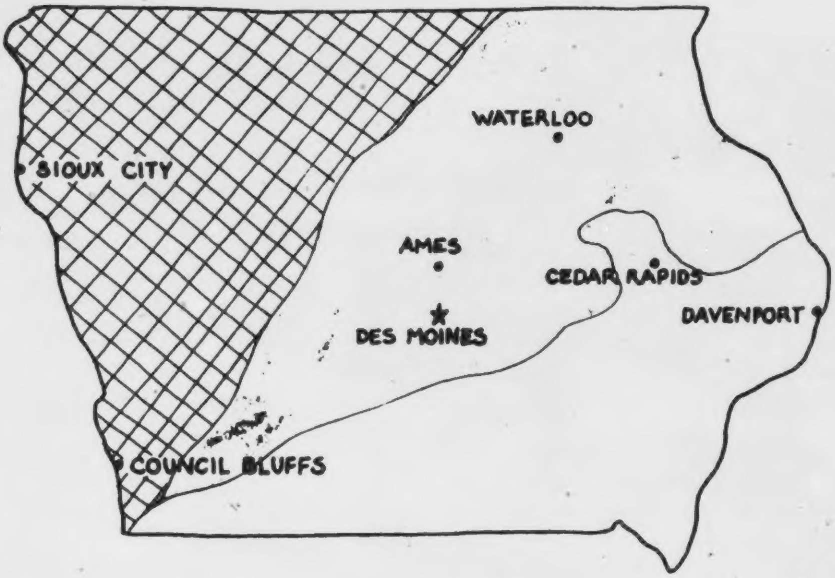
EXERCISE

On your own paper, answer the following questions about diagrams.

1. What is a caption?
2. Why might a diagram employ different colors?
3. If more than one color can not be printed, what is often used instead?
4. Why are arrows and lines used in diagrams?
5. Why should you follow arrows and lines carefully?
6. Explain what a letter (or number) key is.

SELF POST-TEST

In the following diagrams, list the diagram devices used, and on your own paper answer the questions asked about each diagram.


WATERLOO
SIOUX CITY
AMES
CEDAR RAPIDS
DAVENPORT
DES MOINES
COUNCIL BLUFFS

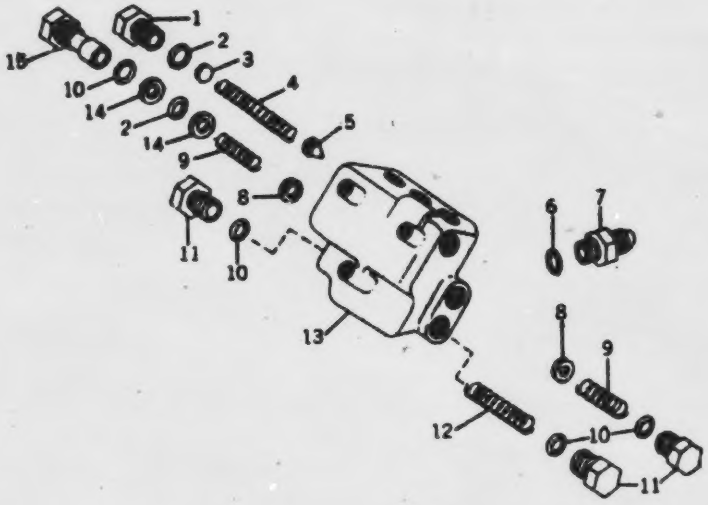
Adequate subsoil moisture diagram

▨ less than adequate moisture

░ adequate moisture

□ better than adequate moisture

1. What cities on the map fall into the "less than adequate" zone?
2. Draw the symbol for adequate moisture.
3. Generally speaking, the driest area in the state is which of the following? NE, NW, SE, SW
4. What cities fall into the "more than adequate" zone?
5. What diagram devices are used in this diagram?



1--Pressure Control Valve Plug
2--O-ring (2 used)
3--Shim (use as required)
4--Pressure Control Valve Spring
5--Pressure Control Valve Orifice
6--O-ring (4 used)
7--Connector (4 used)
8--Washer (2 used)
9--Direction Control Valve Spring (2 used)
10--O-ring (4 used)
11--Plug (3 used)
12--Torque Control Valve Spring
13--Control Valve Body
14--Backup Ring (2 used)
15--Direction Control Valve Plug

1. Draw a shim.
2. Draw a direction control valve spring.
3. What is number 12?
4. What is number 13?
5. What diagram devices are used in this diagram?

OBJECTIVE 3

Students will demonstrate a knowledge of how to determine the meaning of 9 out of 11 technical or new terms found in manuals.

STRATEGY

As you read directions, you may come to words you don't know that you need to know in order to be able to complete the instructions. It may be a word that stands for a certain procedure, such as synchronize or rotate, or it may be a word that names a part, such as bushing.

If you come to an unfamiliar word, you need to be able to know how to find the meaning of the word before you can proceed with the instruction. There are three main ways to locate the meaning of a word in directions.

1. You could check a diagram to see if the object is identified there. Most repair manuals use diagrams to give information, so see if the meaning of a word can be figured out by the diagram.

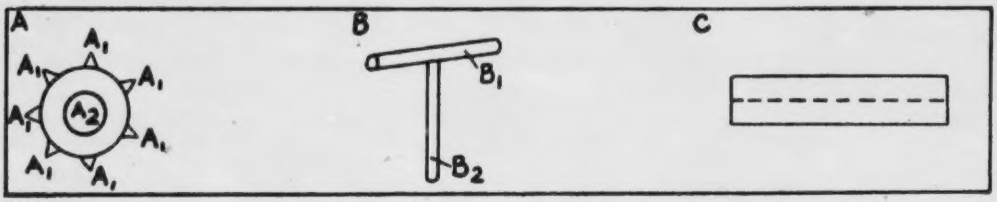
2. Use a dictionary. If the word is a general procedure word you may be able to find it in a dictionary.

3. Ask someone who is sure to know. If you are working on your tractor and don't know a word in the manual, you might ask an expert, like an implement dealer.

CAUTION: The approach of asking someone has two disadvantages. 1) It's inconvenient to have to rely on someone else. There may not always be someone there to ask. 2) The person you ask may not give you the right answer.

EXERCISE

Below you will find an imaginary diagram with some imaginary directions. Tell where you would look to find out the meanings of the strange words that appear in the directions.



A - turnpoint
B - handle crank
C - dot board

A_1 - pointers
A_2 - turnpoint center
B_1 - handle handle
B_2 - crank crank

DIRECTIONS: (1) Insert (2) crank crank end into the (3) turnpoint center until it is tight. (4) Rotate (5) clockwise across the center of the (6) dot board, (7) lengthwise, so that the (8) pointers (9) perforate the surface of the dot board in a straight line with (10) sloobs.

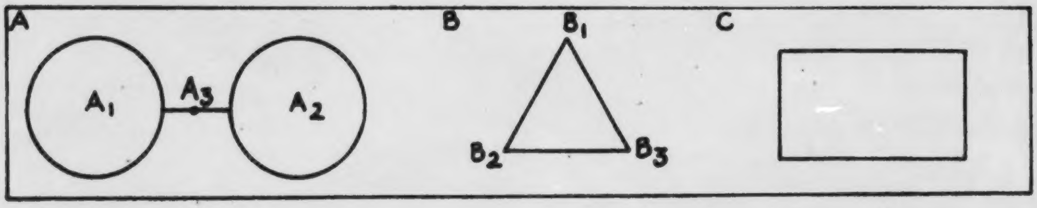
If you didn't know the meaning of the numbered words, what is the best source to find the information?

	Diagram	Dictionary	Expert
1. insert	____	____	____
2. crank crank	____	____	____
3. turnpoint center	____	____	____
4. rotate	____	____	____
5. clockwise	____	____	____
6. dot board	____	____	____
7. lengthwise	____	____	____
8. pointers	____	____	____
9. perforate	____	____	____
10. sloobs	____	____	____

If you marked any of these expert, list the disadvantages to relying on this source.

SELF POST-TEST

List the best source to find out the meaning of the words underlined in the directions.



A - biglobe
A_1 - left sphere
A_2 - right sphere
A_3 - cross bar

B - pyrim
B_1 - point 1
B_2 - point 2
B_3 - point 3

C - goldbar

DIRECTIONS: (1) Invert the (2) pyrim from its present position so that (3) point 1 is at the (4) bottom most point of the object. (5) Affix (6) B_1 to the center of the (7) crossbar in the (8) biglobe. (9) Balance the (10) goldbar (11) symetrically on the upward flat surface of the pyrim.

	Diagram	Dictionary	Expert
1. invert			
2. pyrim			
3. point 1			
4. bottom most			
5. affix			
6. B_1			
7. crossbar			
8. biglobe			
9. balance			
10. goldbar			
11. symetrically			

OBJECTIVE 4

Students will be able to correctly define 18 out of 20 directional terms.

STRATEGY

Any written instructions will tell you things to do, actions to take, to accomplish the job at hand. Recipes, which are written instructions, use words like baste, boil, pare, core, beat, knead, and blanch. If you don't know what action each of those words tells you to do you could end up with a disaster in the kitchen.

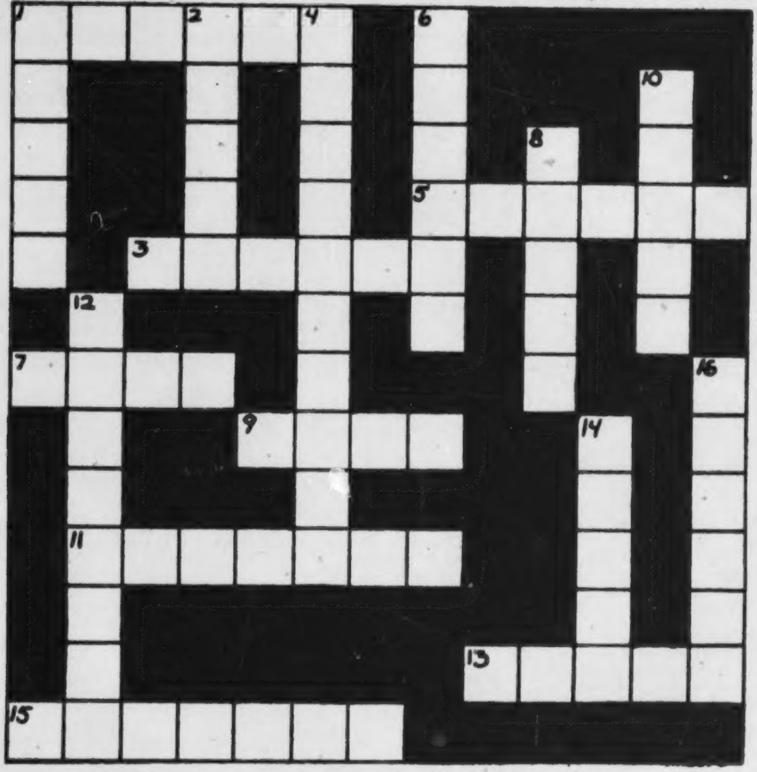
Likewise, it is necessary to know the meaning of action and directional terms found in repair manuals.

Study the following words and their meanings:

1. disconnect - unattach, break the connection between
2. remove - take away
3. loosen - make less tight
4. bend - to curve or turn
5. place - put in a position, set
6. close - to shut
7. tighten - to make more firmly fixed
8. solder - to join or repair with metal alloy
9. position - place
10. check - look over, review
11. install - put in or on

12. prime - to prepare for operation
13. align - to arrange in a line
14. soak - wet thoroughly
15. clean - remove dirt and particles of unwanted materials
16. fasten - make secure, attach
17. determine - to tell, or establish, as being true
18. rotate - turn in a circular motion
19. pull - to move something by force applied toward
20. slide - to move in smooth contact with surface
21. obtain - to get
22. mount - place upon

Copy this grid onto a piece of graph paper. Then complete the crossword puzzle with the directional words you have learned.



ACROSS

1. put in a position, set
3. take away
5. join with metal alloy
7. wet thoroughly
9. curve, torn
11. make more firmly fixed
13. remove dirt
15. put in or on

DOWN

1. prepare for operation
2. shut
4. unattach
6. make less tight
8. bring into a line
10. review, look over
12. put in place
14. attach, make secure
16. get

SELF POST-TEST

Match the term with the correct definition.

____ 1. align
____ 2. bend
____ 3. check
____ 4. clean
____ 5. close
____ 6. determine
____ 7. disconnect
____ 8. fasten
____ 9. install
____ 10. loosen
____ 12. obtain
____ 13. place
____ 14. position
____ 15. prime
____ 16. pull
____ 17. remove
____ 18. rotate
____ 19. slide
____ 20. soak
____ 21. solder
____ 22. tighten

a. remove dirt
b. join with a metal alloy
c. turn on curve
d. move in a circular motion
e. wet thoroughly
f. arrange in a row
g. put in position, set
h. prepare for operation
i. unattach
j. get
k. attach, make secure
l. to tell, or establish as being true
m. review carefully
n. move something by force applied toward
o. shut
p. move in smooth contact with a surface
q. make less tight
r. make more firmly fixed
s. place
t. put upon or in
u. put in
v. take away

If you missed more than 3 see your instructor before continuing on.

OBJECTIVE 5

Students will demonstrate the ability to note correct sequence in 8 out of 10 directional procedures.

Do these directions for growing a pineapple make sense?

1. When the pineapple top has dried, plant it in a small pot filled with damp, sandy soil.
2. Slice off the top two inches of a fresh pineapple.
3. When the pineapple has rooted, plant it in a larger pot filled with sandy potting soil.
4. Keep the sand in the small pot moist, and the pineapple top will sprout roots.
5. Let the pineapple top dry on a plate for ten days.

What's wrong with the directions above? . . . That's right, they are in the wrong order. If you followed that order, or sequence for planting a pineapple, you certainly wouldn't have much luck. To make sense, directions should be written in the exact sequence they are to be followed.

AND WHEN YOU ARE READING A SET OF DIRECTIONS, IT'S IMPORTANT FOR YOU TO PAY CAREFUL ATTENTION NOT ONLY TO THE MATERIALS YOU'LL NEED BUT ALSO TO THE SEQUENCE IN WHICH THINGS SHOULD BE DONE.

If you've ever built something that didn't turn out quite right, or tried to cook something that was not a success, the reason may not have been that you didn't read the directions carefully and note the right sequence in following them.

Now reread the directions for growing a pineapple and try putting them in the correct sequence. What would be the first thing you'd have to do? . . . Right, *slice off the top two inches of a fresh pineapple.* Then what would you do? . . . Yes, *put the pineapple top on a plate and let it dry for ten days.* What would be the next step? . . . Yes, *plant the pineapple top in a small pot filled with damp, sandy soil.* Then what would you do? . . . Yes, *keep the sand moist so that the pineapple top will sprout roots.* Finally, what would you do? . . . Of course, *when the pineapple top has rooted, you would plant it in a larger pot filled with sandy potting soil.* You might be able to grow your own fresh pineapple by following these directions--in the correct sequence, of course!

Noting the correct sequence is important in almost everything you do. Would you tie the shoelaces on your shoes before you put your shoes on? Would you walk across a busy street before looking to see if any cars were coming? No, you probably wouldn't. Things like tying your shoelaces *after* putting on your shoes and looking to see if any cars are coming *before* crossing a busy street are things you would do in the right sequence without even thinking about it. You might not even realize that there is a sequence of events happening, but there is.

Number the following steps from 1 - 8 according to the order in which the steps should be done.

____ Turn the egg over with a spatula and cook for one-half minute.

____ Place one teaspoon of butter in a skillet.

____ Season the cooked egg with salt and pepper.

____ Melt the butter on low heat.

____ Remove the egg from the pan.

____ Baste the egg with the hot butter.

____ Pour the egg gently from the saucer into the pan.

____ Break an egg into a saucer.

SELF POST-TEST

Read the directions listed below, then on your own paper number the statements below in the order they should be done.

BEETS

PLANT in deep, well worked, stone-free soil after danger of frost--spring to early summer. In Deep South, Gulf Coast and Pacific Coast areas--fall to early spring. In rows 1 to 2 feet apart, plant seeds evenly and cover with ¼ to ½ inch of fine soil. Firm lightly. Plants emerge in 10 to 21 days depending on soil and weather conditions. THIN seedlings to stand 3 to 4 inches apart when plants are 1 to 2 inches high.

____ Make rows in the dirt 1 to 2 feet apart.

____ Thin the seedlings when they're 1 to 2 inches high.

____ Cover seeds with ¼ to ½ inch of dirt.

____ Read all the directions on the seed packet.

____ Wait until all the danger of frost is over.

____ Wait for 10 to 21 days and plants will emerge.

____ Enjoy eating fresh beets.

____ Plant seeds evenly in the row.

____ Wish you had planted more beets when these are all gone.

____ Prepare the soil by working it and removing stones.

If you missed 2 or more, see your instructor before going on.

OBJECTIVE 6

Students will be able to identify cautions in written instructions.

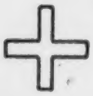
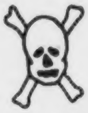
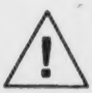
One important thing written directions do is tell you when and where to be extra careful in following those directions. That is one reason to read instructions all the way through before you begin. You will see what you have to be extra careful about.

STRATEGY

Clues to caution:

A. Often cautions are printed in LARGE PRINT or in a *different color,* or underlined from the rest of the instructions.

B. Sometimes cautions are marked with a special symbol:


or

or


These symbols and symbols like them warn you of safety hazards or situations that call for extra care.

C. Certain words are a sign of caution in a written instruction. Some of these words are:

DANGER
BEWARE
CAUTION

NEVER
DO NOT
ALWAYS

PRECAUTIONS
WARNING
REMEMBER

PRACTICE

In the following examples write down the caution given in the direction, then write down the clue(s) to the caution, either the word, symbol, or printing device. The first one is done for you.

1. ⚠ **CAUTION:** Cleaning and repairing a fuel tank is very dangerous. Live sparks, smoking, or fire of any nature should never be permitted in the vicinity of the cleaning operation.

   Caution: cleaning fuel tank is dangerous, don't let fire near

   Clues: ⚠ CAUTION, dangerous, never

2. Remember, **ALWAYS MEASURE** the amount of Tide you need for each load.

   Caution: ____________________

   Clues: ____________________

3. Plant only when all danger of frost has passed.

   Caution: ____________________

   Clues: ____________________

4. **DANGER:** In case of eye contact, flush with water for 15 minutes. Get prompt medical attention.

   Caution: ____________________

   Clues: ____________________

5. **CAUTION:** For sensitive skin, use rubber gloves when working with this cleaner.

   Caution: ____________________

   Clues: ____________________

6. **CAUTION** - Contents under pressure. Never puncture or throw container into fire. Never place in area where temperature may exceed 120°, which may cause container to burst.

Caution: ____

Clues: ____

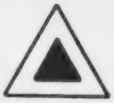
7. ⚠ **SAFETY WARNING:** To prevent possible eye injury when grinding, always wear proper eye protection.

Caution: ____

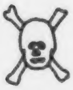
Clues: ____

SELF POST-TEST

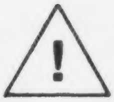
On your own paper, write down the caution clues for each example below. There may be more than one.

1.  **SAFETY WARNING:** Replace lock pins after adjustment to insure handle remains on mower during operation.

   Caution clues: ______________________________

2.  **ELECTROLYTE IS SULFURIC ACID.** Keep out of the reach of children.

   Caution clues: ______________________________

3.  **CAUTION:** Do not exceed the 3.004 inch dimension. Machining the flywheel in excess of this distance could make the flywheel unsafe at higher engine RPM.

   Caution clues: ______________________________

4. **CAUTION:** If the BRAKE light goes on, it is an indication of brake system malfunction, and should be attended to immediately.

   Caution clues: ______________________________

5. DO NOT USE A TWO-PRONG ADAPTER IN CANADA.

   Caution clues: ______________________________

6. Caution - Do not couple a trailer hydraulic brake system directly to the car brake system.

   Caution clues: ______________________________

7. MAKE SURE the bottom rods are fully extended to permit rotation of antenna in ball joints TO AVOID DAMAGE.

Caution clues: ______________________________

8. CAUTION: Follow manufacturer's instructions exactly. AVOID CONTACT OF CHEMICAL WITH YOUR SKIN OR EYES; chemical contains creosals which can be very harmful.

Caution clues: ______________________________

9. **DANGER**
HIGH VOLTAGE

Caution clues: ______________________________

10. WARNING: Keep this, and all medicine, out of the reach of children.

Caution clues: ______________________________

Check your answers with your instructor. If you missed more than two, see your instructor before continuing.

OBJECTIVE 7

Students will be able to identify different parts of typical manuals and their functions.

Most repair or instruction manuals have several different sections. Each section serves a different purpose, and gives different information. Learn the different sections of any manual you will be using.

STRATEGY

Almost any manual will have:

1. Cover - Of course, every manual has a cover. The reason it is important is that it tells you which machine the manual deals with. If you work with several machines made by the same company, their repair manuals may look very similar. Be sure to read the cover of any manual you may pick up to be sure it goes with the machine you want to repair.

2. Table of Contents - tells you what page to look to to find certain information.

   EXAMPLE:

   TABLE OF CONTENTS

	Page
Specifications	5 - 10
Tune-Up	11 - 15
Lubrication	16 - 18
Separation	19 - 20

3. An Introduction - tells you generally how the manual is set up, and what certain symbols may mean, such as the safety symbol in the instruction. ⚠

STRATEGY (contd.)

4. Sections - often repair manuals are divided into sections, like chapters, that each deal with a certain part of the equipment. These sections may be set off by notebook-like tabs, as you see below.

GENERAL	ENGINE	FUEL SYSTEM	POWER TRAIN	STEERING	ELECTRIC	MISC.
1	2	3	4	5	6	7

5. General - most repair manuals will start with a "general" section. This gives you information relating to the whole machine and reminds you of basic information you should know when working on the machine.

6. Miscellaneous - this word means "odds and ends" or things that don't fit neatly into other categories. Almost every good repair manual has a miscellaneous section, as you can see pictured in Number 4, above.

EXERCISE

On your own paper answer the questions below.

1. Why is it so important to read the cover of a manual?
2. What does miscellaneous mean?
3. Explain the type of information found in the "general" section of a manual.
4. What information is found in the table of contents?
5. What information is found in the introduction?
6. Explain why repair manuals are usually divided into sections.

SELF POST-TEST

Match the part of the manual with the job it does.

____ Cover

____ General Section

____ Introduction

____ Miscellaneous Section

____ Sections

____ Table of Contents

a. explains the general layout of the manual

b. tells what pages things appear on

c. reviews overall information

d. manuals are often divided into these according to subject

e. tells what machine the manual deals with

f. discusses the "odds and ends" that don't fit into other sections

If you missed any of these, see your instructor before you continue.

REFERENCES USED FOR THIS UNIT:

IRS Kit C "Following Directions", Houghton Mifflin, Boston, 1976

Technical Manual, TM-1029 4320 Tractor, John Deere Co., Moline, Illinois, 1970

Wiener, Harvey S., Giving and Following Directions, The Writing Lab, Glenco Press, Beverly Hills, 1974

ANSWER KEY
READING A MANUAL & FOLLOWING DIRECTIONS
AG.

Obj. 1

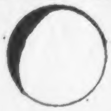
Student's name in upper right [illegible] corner of paper.

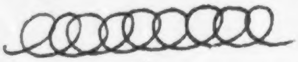
ABCDEFGHIJKLMNOPQRSTUVWXYZ

K HQNNQYGF VJG FKTGEVKQPU
I FOLLOWED THE DIRECTIONS

Obj. 2

1. explanation written under illustrations and diagrams.
2. to indicate two things, such as two different systems.
3. different designs.
4. to indicate the name on label of part of diagram.
5. so you will correctly identify each part of the diagram.
6. a letter or number key is another form of labelling of diagrams.
    1. Souix City, Council Bluffs
    2. ■
    3. NW
    4. Cedar Rapids, Davenport
    5. color codes

1.


2.


3. tongue control value spring
4. control value body
5. number key lines

Obj. 3

1. dictionary
2. diagram
3. diagram
4. dictionary
5. dictionary
6. dictionary
7. dictionary
8. diagram
9. dictionary
10. dictionary

(disadvantages of asking an "expert" - inconvenient, you might not get the right answer.)

1. dictionary
2. diagram
3. diagram
4. dictionary
5. dictionary
6. diagram
7. diagram
8. diagram
9. dictionary
10. diagram
11. dictionary

Obj. 4

ACROSS
1. place
3. remove
5. solder
7. soak
9. bend
11. tighten
13. clean
15. install

DOWN
1. prime
2. close
4. disconnect
6. loosen
8. align
10. check
12. position
14. fasten
16. obtain

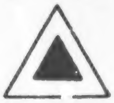
1. f
2. c
3. m
4. a
5. o
6. l
7. i
8. k
9. t
10. q
12. j
13. g
14. s
15. h
16. n
17. v
18. d
19. p
20. e
21. b
22. r

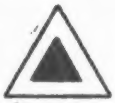
Obj. 5

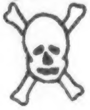
6	4
1	8
8	6
2	1
7	2
5	7
4	9
3	5
	10
	3

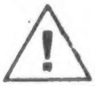
Obj. 6

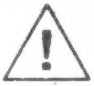
2. Make sure you use the right amount of detergent.
   ALWAYS MEASURE
3. Be careful not to plant to early.
   danger of frost
4. Be careful not to get substance in eyes.
   DANGER
5. Be careful not to get substance on skin.
   CAUTION
6. Do not put container in a place where it might explode.
   CAUTION never
7. Be careful of eyes when working.

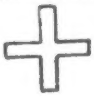

SAFETY WARNING always

1. 
SAFETY WARNING

2. 
ELECTROLYTE is SULFURIC ACID

3. 
CAUTION: Do not, unsafe

4. CAUTION
5. DO NOT
6. Caution, do not
7. MAKE SURE, DAMAGE
8. 
CAUTION, AVOID, harmful

9. DANGER
10. 
WARNING

Obj. 7

1. to make sure you have the right manual.
2. odds and ends.
3. relating to the whole machine.
4. pages where different things are found.
5. tells generally how the manual is set up.
6. so that each section deals with a certain part of the machine

E cover

F miscellaneous section

C general section

D sections

A introduction

B table of contents

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